

COMPREHENSIVE FARMLAND PRESERVATION PLAN - 2010

for the
Township of Union
County of Hunterdon



Compiled by



**The Land Conservancy
of New Jersey**
A nonprofit land trust

with

**Township of Union
Agricultural Advisory Committee**

January 2010

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JANUARY 2010

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Union Township Agricultural Advisory Committee:

Paige DiRoberto, Chair
Scott Eichlin
Brian Kirkpatrick
Michael Matthews
Ken Ravenburg

Union Township Committee:

Matt Severino, Mayor
William Bischoff, Jr., Deputy Mayor
Patricia Dziubek
Rob Haynes
Frank T. Mazza

Union Township:

Ella M. Ruta, Clerk
J. Peter Jost, Attorney
Grace Brennan, Chief Financial Officer
Robert Vance, Tax Assessor

Clarke Caton Hintz

Carl Hintz and Lisa Specca, Township Planners

Hunterdon County Department of Planning:

William Millette, Assistant Planner, County Agriculture Development Board

U.S. Department of Agriculture Farm Service Agency:

Virginia Brophy

Rutgers Cooperative Extension of Hunterdon County:

Win Cowgill

State Agriculture Development Committee:

Timothy A. Brill, Planning Manager and Steve Bruder, Senior Planner

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EXECUTIVE SUMMARY



From rolling fields in the south to the Spruce Run Reservoir in its north, Union Township's farm fields and natural lands comprise some of the most beautiful agricultural areas in New Jersey. The Township is located within the Highlands and Piedmont Physiographic Provinces, and much of the northern region is preserved land within the scenic Clinton Wildlife Management Area and Spruce Run Reservoir. The fertile land base and excellent soils of Union Township supports a thriving and stable farming industry.

Union Township is one of many horse farm municipalities within Hunterdon County, and many area residents board horses and enjoy riding lessons. Hay farming to support the equine industry is a critical component of the Township's farming base. Union Township's natural and agricultural areas are interspersed on both sides of the I-78 highway corridor, and the Township's farmland is primarily concentrated in its southern portion. Union Township has thus far been able to retain its agricultural landscape and hopes to continue to do so, by aggressively pursuing and supporting farmland preservation within its community.

Since the Township established its farmland preservation program in 1996, 528 acres of farmland has been permanently protected within its borders through the state and county. An additional 262 acres of municipally preserved farmland are protected through deed restrictions and agricultural easements. Union Township administers a municipal trust fund (\$0.02/\$100 assessed value) to help fund farmland and open space projects. The fund, along with this *Comprehensive Farmland Preservation Plan*, demonstrates the Township's commitment to aggressively pursue preservation of farmland. The Township has set an ambitious goal of preserving an additional:

One year target:	100 acres
Five year target:	400 acres
Ten year target:	750 acres

For a total of 1,540 acres of preserved farmland in the Township of Union in ten years.

This 2010 *Comprehensive Farmland Preservation Plan* documents the Township's emphasis on farmland preservation. It identifies four Project Areas (Hampton- Spruce Run Project Area, Hoffman Project Area, Pattenburg Project Area, and Pittstown Project Area) that are the basis for farmland preservation efforts in Union Township.

CHAPTER 1: AGRICULTURAL LAND BASE OF UNION TOWNSHIP



Union Township supports 3,837 acres of agricultural assessed property. (*Union Township Farmland Assessment data; see Appendix for block and lot inventory of all farmland assessed parcels in the Township and the Farmland Map in the Maps Section*) Union Township has a demonstrated history of protecting its agricultural lands and the economy they support. Union Township's rolling topography affords residents and visitors expansive views over the lush, green farmlands that cover much of the Township.

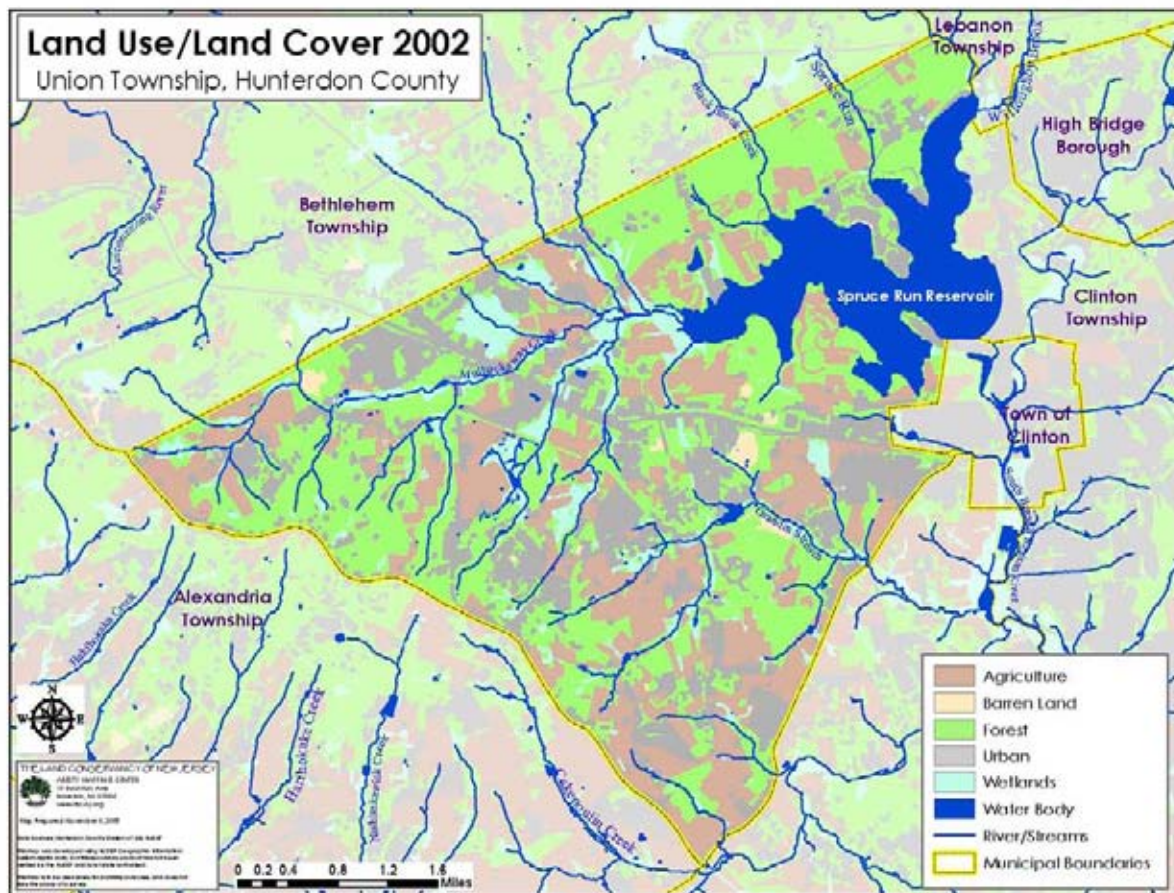
The Township is bordered by Bethlehem Township in the northwest and Alexandria Township in the southwest. Union Township is bordered by four Townships in the east, including Lebanon Township, Clinton Township, Town of Clinton, and Franklin Township. Bloomsbury Road runs along the southwest portion of Union Township, separating it from Alexandria Township. The southeast border with Franklin Township follows Pittstown Road up to I-78 where the Town of Clinton borders a small portion of Union Township north of I-78 and south of Spruce Run Reservoir. The border between Union Township and Clinton Township runs through Spruce Run Reservoir. The northernmost portion of Union Township is separated from Lebanon Township along Route 31.

Agricultural Landscape

Union Township is one of a number of rural municipalities in New Jersey that fall within both the Highlands and Piedmont Physiographic Provinces. The boundary between these two regions crosses Union Township near its northwestern border with Bethlehem Township. (*Union Township Open Space Plan*)¹ The Highlands Province in Union Township contains a number of farms, but due to its steep slopes does not support the larger number of farms that the lower lying Piedmont region does. The Piedmont, containing very few steep slopes and rich soils, is where the majority of the Township's farms are located. (*Union Township Open Space Plan*)

The Land Use/Land Cover map (shown next page) depicts the different types of land cover, such as wetlands, forest, and agriculture, which are present throughout the Township. This type of mapping can be used to show changes in land use over a period of time (and is discussed further in *Chapter 3* of this Plan). The map shown here represents the most recent land use/ land cover data for Union Township. The 2002 data illustrates that vast stretches of the Township are occupied by forest and farmland, which

contribute to its rural agricultural landscape. And according to the 2002 NJDEP Land Use/Land Cover data there are 3,030 acres of agricultural land in Union Township.



Soils

The Natural Resources Conservation Service (NRCS) classifies certain soils as prime, of statewide importance, or unique based on their agricultural productivity. These soils comprise approximately 67% of the Township (*see Agricultural Soils chart below and the Agricultural Soils Categories Map in Maps Section*). *Prime farmland soils* rest on land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops. They have the quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed according to acceptable farming methods. Prime soils flood infrequently and are not excessively erodible or saturated with water for a long period of time. *Farmland soils of statewide importance* produce high crop yields when treated and managed according to acceptable farming methods. However, their yields are rarely as high as those of prime soils. *Unique soils* exhibit specific qualities that may be favorable to the production of specialized crops (*see Active Agricultural Soils chart*). (*NRCS Web Soil Survey*)²

Soil types are determined by the parent bedrock material from which they were formed, the drainage characteristics they exhibit, and the steepness of the slopes on which they are found. Soil types are grouped into larger categories called soil series, which are based on the parent materials, chemical compositions, and profiles of their member soil types. Soil series are themselves grouped into broader categories and were formed through similar processes. (*NRCS Web Soil Survey*)

Soils of Union Township, New Jersey			
<i>Source: Natural Resources Conservation Service Soil Data Mart and Web Soil Survey</i>			
Soil Abbr	Name	Acreage	Agricultural Soil Category
AnoB	Annandale gravelly loam, 3 to 8 percent slopes	163	Prime
AnoC2	Annandale gravelly loam, 8 to 15 percent slopes, eroded	81.1	Statewide
ANWTB	Annandale and Gladstone gravelly loams, 3 to 8 percent slopes	356.7	Prime
ANWTC	Annandale and Gladstone gravelly loams, 8 to 15 percent slopes	38.7	Statewide
BefB	Bedington channery silt loam, 2 to 6 percent slopes	179.9	Prime
BefC2	Bedington channery silt loam, 6 to 12 percent slopes, eroded	99.1	Statewide
BegB	Berks channery loam, 2 to 6 percent slopes	188.9	
BegC2	Berks channery loam, 6 to 12 percent slopes, eroded	785	Statewide
BegD2	Berks channery loam, 12 to 18 percent slopes, eroded	546.4	Statewide
BhnC2	Birdsboro silt loam, 6 to 12 percent slopes, eroded	19.3	Statewide
BoyAt	Bowmansville silt loam, 0 to 2 percent slopes, frequently flooded	271.1	Statewide
BucB	Bucks silt loam, 2 to 6 percent slopes	43.2	Prime
BucC2	Bucks silt loam, 6 to 12 percent slopes, eroded	6.3	Statewide
CakB	Califon loam, 3 to 8 percent slopes	198.3	Prime
CanBb	Califon gravelly loam, 0 to 8 percent slopes, very stony	183.1	
ChcB	Chalfont silt loam, 2 to 6 percent slopes	7.6	Statewide
CoaA	Cokesbury loam, 0 to 3 percent slopes	93.8	
CoaBb	Cokesbury loam, 0 to 8 percent slopes, very stony	78.6	
DufB	Duffield silt loam, 2 to 6 percent slopes	110.6	Prime
DufC2	Duffield silt loam, 6 to 12 percent slopes, eroded	35.7	Statewide
DugCg	Duffield silt loam, 0 to 12 percent slopes, rocky	122.4	
DugDh	Duffield silt loam, 12 to 18 percent slopes, very rocky	15.8	
FmhAt	Fluvaquents, loamy, 0 to 3 percent slopes, frequently flooded	54.5	
FNAT	Fluvaquents and Udifluvents, 0 to 3 percent slopes, frequently flooded	235.3	
GkaoB	Gladstone gravelly loam, 3 to 8 percent slopes	578.7	Prime
GkaoC2	Gladstone gravelly loam, 8 to 15 percent slopes, eroded	657.6	Statewide
GkaoD	Gladstone gravelly loam, 15 to 25 percent slopes	116.7	
GKAPCC	Gladstone and Parker soils, 8 to 15 percent slopes, extremely stony	186.9	
HdyB	Hazleton channery loam, 2 to 6 percent slopes	0.2	Statewide
HdyC2	Hazleton channery loam, 6 to 12 percent slopes, eroded	7.3	

Soils of Union Township, New Jersey

Source: Natural Resources Conservation Service Soil Data Mart and Web Soil Survey

Soil Abbr	Name	Acreage	Agricultural Soil Category
HdyEb	Hazleton channery loam, 18 to 40 percent slopes, very stony	1.1	
KkoC	Klinesville channery loam, 6 to 12 percent slopes	15.8	
LbtB	Lansdowne silt loam, 2 to 6 percent slopes	55.7	Statewide
MemB	Meckesville gravelly loam, 2 to 6 percent slopes	385.4	Prime
MemC2	Meckesville gravelly loam, 6 to 12 percent slopes, eroded	294.1	Statewide
NotB	Norton loam, 2 to 6 percent slopes	181.1	Prime
NotC2	Norton loam, 6 to 12 percent slopes, eroded	170.1	Statewide
NotD2	Norton loam, 12 to 18 percent slopes, eroded	15.2	
ParC	Parker cobbly loam, 3 to 15 percent slopes	205.7	
ParD	Parker cobbly loam, 15 to 25 percent slopes	329.8	
ParEe	Parker cobbly loam, 18 to 40 percent slopes, extremely stony	383.2	
PdtB	Pattensburg gravelly loam, 2 to 6 percent slopes	851.3	Prime
PdtC2	Pattensburg gravelly loam, 6 to 12 percent slopes, eroded	1,664.50	Statewide
PdtD	Pattensburg gravelly loam, 12 to 18 percent slopes	248.9	
PdtE	Pattensburg gravelly loam, 18 to 40 percent slopes	404.4	
PdtmB	Pattensburg gravelly loam, moderately wet, 2 to 6 percent slopes	482.2	Prime
PeoB	Penn channery silt loam, 2 to 6 percent slopes	36.3	Prime
PeoC2	Penn channery silt loam, 6 to 12 percent slopes, eroded	2.2	Statewide
PHG	Pits, sand and gravel	175	
QukB	Quakertown silt loam, 2 to 6 percent slopes	122	Prime
QukC2	Quakertown silt loam, 6 to 12 percent slopes, eroded	146.4	Statewide
QukD2	Quakertown silt loam, 12 to 18 percent slopes, eroded	14.5	
RarAr	Raritan silt loam, 0 to 3 percent slopes, rarely flooded	17.4	Prime
RarB	Raritan silt loam, 3 to 8 percent slopes	236.5	Prime
RksB	Riverhead gravelly sandy loam, 3 to 8 percent slopes	8	Prime
RNGE	Rock outcrop-Gladstone complex, 15 to 45 percent slopes	4.3	
ROPF	Rough broken land, shale	224.3	
RorAt	Rowland silt loam, 0 to 2 percent slopes, frequently flooded	212.9	
TurB	Turbotville loam, 2 to 6 percent slopes	329.7	
UdrB	Udorthents, refuse substratum, 0 to 8 percent slopes	31.1	
WadB	Washington loam, 3 to 8 percent slopes	360.1	Prime
WadC2	Washington loam, 8 to 15 percent slopes, eroded	25.9	Statewide

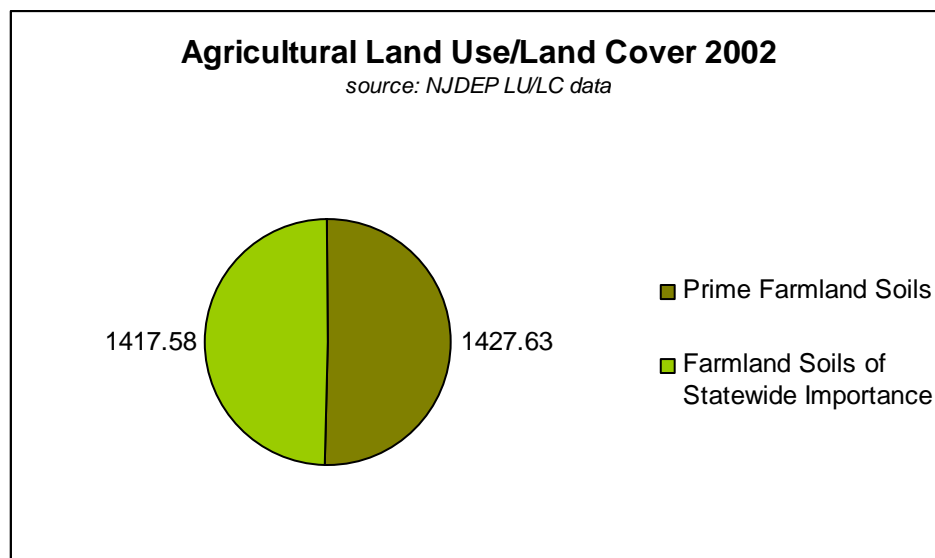
In summary, there are 4,528 acres (34.4% of the municipality) which have prime farmland soils and 4,746 acres (36.10%) of the municipality with farmland soils of statewide importance.

The following major soils series are found in Union Township:

- Accounting for 30% of the total soils in the Township, the *Pattenburg series* (PdtB, PdtC2, PdtD, PdtE, and PdtmB) contributes the majority of the prime farmland soils (1,334 acres) and soils of statewide importance (1,665 acres) in the Township. Within the Township this soil series is contained mostly in wooded areas, but if cleared, can be used for growing hay, corn, or pasture.
- The *Washington-Berks association* (BegB, BegC2, BegD2, WadB, and WadC2) accounts for 15% (1,906 acres) of the soils in the Township, and almost 90% of these are soils of statewide importance or prime farmland. This series can support corn, wheat, oats, barley, Christmas trees and hay.
- From the *Gladstone series* (GkaoB, GkaoC2, and GkaoD), the gravelly loam contributes prime farmland soils and soils of statewide importance to the Township. The portion of this series that are prime or statewide soils account for 1,353 acres of land within Union Township. This series is well suited for growing corn, small grains, soybeans, fruit, hay and pasture.
- The *Meckesville series* (MemB and MemC2) contribute 680 acres of prime farmland soils and soils of statewide importance to Union Township. These soils are capable of supporting cropland and pastureland and are concentrated in the part of the Township south of Cooks Cross Road.

Approximately 21% of the Township (2,700 acres) is located on slopes steeper than 15%. (*Master Plan*)³ These soils tend to have a high risk of erosion, require management to control run-off and erosion and have some equipment limitations. (*NRCS Web Soil Survey*)

Based upon the 2002 Land Use/Land Cover mapping and an analysis of the NRCS soils mapping, there are 1,418 acres of farmland soils of statewide importance and 1,428 acres of prime farmland soils in Union Township. (*see chart below*)



Irrigated Land & Water Sources

Groundwater provides the supply of water for irrigation in Union Township. (*Evaluation of Groundwater Resources*)⁴ Groundwater sources are generally preferred to surface waters because they contain less sediment and particulates that may clog irrigation pipes and damage crops. Groundwater aquifers are defined as geologic formations containing enough saturated permeable material to yield sufficient quantities of water to wells and springs. Aquifers and their recharge areas are essential to our water supply. The surficial geology has a notable impact on groundwater availability. The productive groundwater aquifers in Union Township are found in areas underlain by limestone and dolomite bedrock, which provide high water quality and quantity (*see Highlands Council Figure 3-15: Net Water Availability by HUC14 map on following page*). (*Evaluation of Groundwater Resources*)

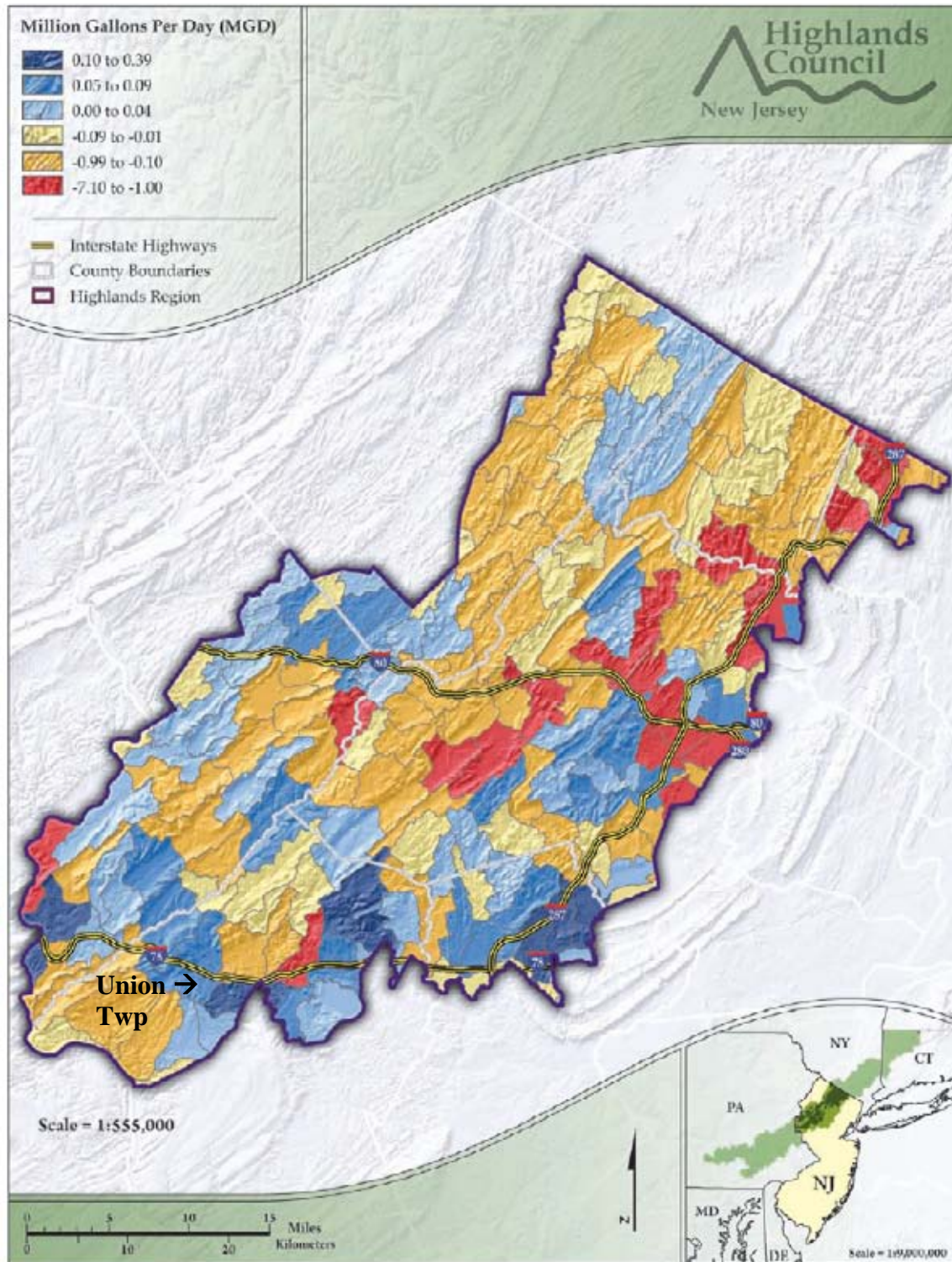
When addressing water quantity, the Highlands Council uses the Low Flow Margin method to estimate groundwater capacity for each of the HUC14 subwatersheds. The volume calculated from the Low Flow Margin method does not represent the total volume available for human use. Most of the water is reserved for the health of the ecosystem and to ensure safe yields of potable water. Therefore the Net Water Availability is calculated by deducting consumptive and depletive water uses from groundwater availability. If a municipality falls into a subwatershed that has a positive availability it is assumed that water is available beyond the existing demand. And those with a negative net availability in their subwatershed are those where the existing uses are exceeding sustainable supplies.⁵ Referring to *Figure 3.15 Net Water Availability* (reproduced on the following page), the Township of Union falls within a subwatershed with a positive net availability indicating that there is a surplus of water available

As shown in the *Highlands Regional Master Plan*, a great deal of land within the Township of Union provides recharge for the groundwater supplies (*see Highlands Council Map Figure 3.16 Prime Groundwater Recharge Areas reproduced on the following page*). The prime groundwater recharge areas shown on this map are defined by as the areas with the highest recharge rates and provide at least 40% of the total recharge for that subwatershed. Another concern is water quality both for ground and surface water. The Township of Union is not unique in that it lies in an area that has impaired water quality. The most prominent causes for impairment of water quality are fecal coliform bacteria, phosphorus, and temperature. (*see Highlands Council Map Figure 3.17 Impaired Waters Overall Assessment by HUC14 reproduced on the following page*).

Union Township's farmers irrigate a very small amount of land. Due to local climate and soils, most of the crops that are grown in the Township, such as corn and hay, do not require irrigation, or even during drought periods are not cost effective to irrigate due to the large amounts of land they occupy. Irrigation is more suited to such crops as vegetables, since they occupy relatively small land areas. However, the Township had only 63 acres of produce crops in 2006. As of 2006, approximately 27 acres of land in Union Township are irrigated for ornamental, fruit, and vegetable operations, with the

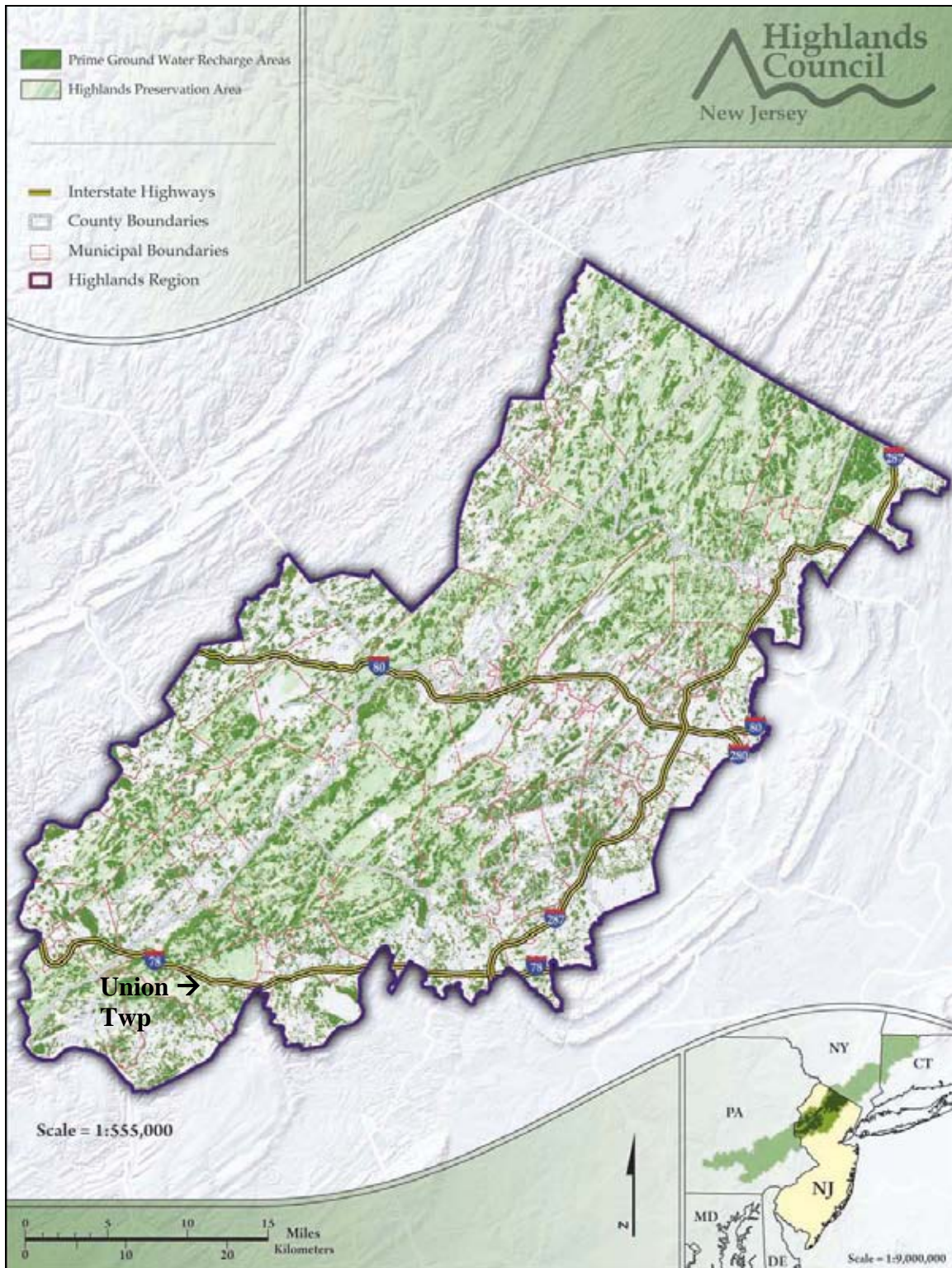
vast majority (22 acres) irrigated for vegetables. The 27 acres of irrigated land represents less than 1% of the Township's farmland. (*New Jersey Farmland Assessment 2006*)⁶

FIGURE 3.15: Net Water Availability by HUC14



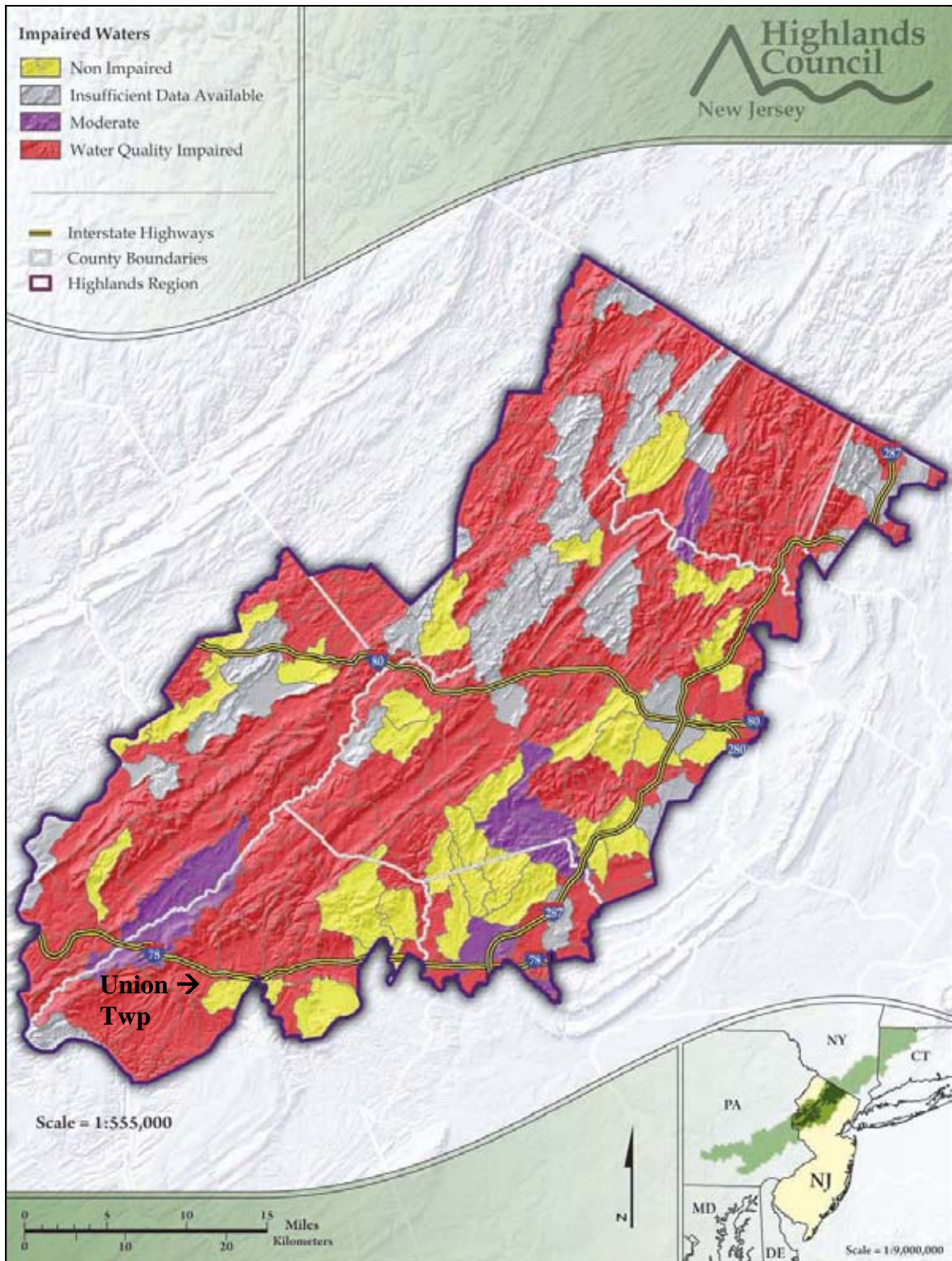
Source: New Jersey Highlands Council

Figure3.16: Prime Ground Water Recharge Areas



Source: New Jersey Highlands Council

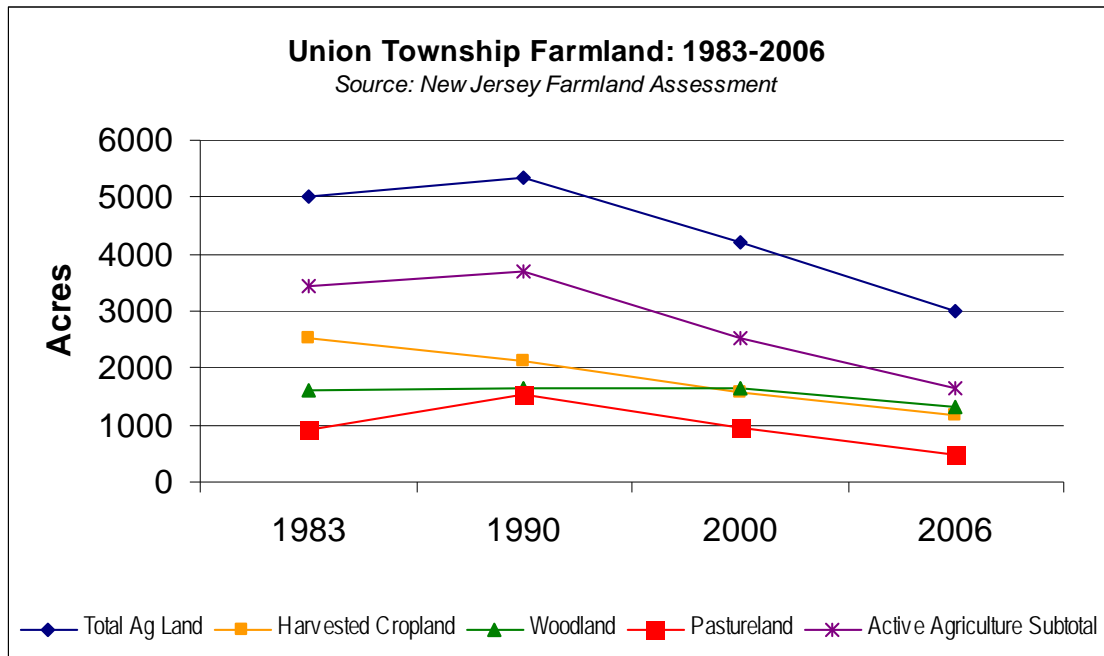
Figure3.17: Impaired Waters Overall Assessment by HUC14



Source: New Jersey Highlands Council

Farmland Trends & Statistics

The overall size of the total agricultural land base in Union Township fell from 1983 (5,010 acres) to 2006 (2,996 acres), a 40% decline (see *Farmland* chart below). (*New Jersey Farmland Assessment*)⁷ The overall Hunterdon County agricultural land base dropped 12% in the same time period. In addition, the composition of the Township's farm assessed land has changed during this time. Harvested cropland has dropped 53% (25% for the County) and pastureland 49% (11% for the County). The only type of farm assessed land that has stayed fairly constant in acreage is total woodland. The increase in some residential and commercial development in the Township, accounted for most of the Township's loss in the other categories. (*New Jersey Farmland Assessment*)



The table below compares the subcategories comprising active agricultural land for both Union Township and Hunterdon County per the New Jersey Farmland Assessment data for the years 1983 through 2006.

Year	Cropland Harvested (Acres)		Cropland Pastured (Acres)		Permanent Pasture (Acres)	
	Union Twp	Hunterdon County	Union Twp	Hunterdon County	Union Twp	Hunterdon County
1983	2,514	74,431	227	8,608	702	19,408
1990	2,131	74,006	352	9,015	1,195	20,216
2000	1,590	64,653	344	8,771	589	17,239
2006	1,173	55,936	126	8,672	347	16,228

Source: New Jersey Farmland Assessment

The crops most negatively affected by these changes in Union Township are corn for grain and silage, which is now planted on 766 (93%) fewer acres than in 1983, and

soybeans which went from 97 acres to no longer being grown in the Township. Alfalfa hay saw a drop of 108 acres, or 53%. Other hay, however, increased in acreage from 605 acres in 1983 to 882 acres in 2006. Corn is a land-intensive crop that has experienced a decline in recent years, due to rising costs of fertilizers and land, and farmers have adjusted by planting less of it. Corn is no longer grown for silage within Union Township as it was in 1983. In addition, the dairy industry, once fairly strong in Union Township, has disappeared since 1983, when there were 703 dairy head in the Township. This means a much lower demand for locally grown corn to feed dairy cows. Finally, some commercial and housing development has decreased field crop acreage in Union Township. The downward trend in corn production may reverse in the near future due to government incentives to increase ethanol production, of which corn is the primary component. Non-alfalfa hay is the only major field crop that has increased significantly since 1983, when there were 605 acres. As of 2006, there were 882 acres, a 68% increase. *(NJDA Farmland Assessment)*

The acreage of farm assessed woodlands in Union Township has remained fairly stable. Cropland left abandoned or fallow for extended periods of time undergoes ecological succession into forested land. The increasing costs of farming and farmland in the Township have compelled local farmers to produce less land-intensive products and leave parts of their farms fallow. Also, continuously rising property taxes have encouraged more landowners of forested properties to obtain farmland tax assessment, thereby increasing the amount of forested farmland in the Township.

The trend towards smaller average and median farm sizes has been prominent throughout New Jersey and Hunterdon County over the past thirty years. With the previously mentioned Hunterdon County wide 12% decrease in the overall agricultural land base, there has conversely also been an increase in the number of County wide farms from 1,180 in 1982 to 1,514 in 2002, a 22% increase which corresponds to more farms of smaller size, but overall less land in agricultural production. *(NJDA 2007 Hunterdon County Agricultural Profile)*⁸ This trend is likely similar in Union Township, especially with the decline in land intensive dairy cow farming. Many former large farms have likely been divided into smaller farming operations that require less land.

Hunterdon County	1987	1992	1997	2002
Farms (number)	1,398	1,299	1,313	1,514
Land in Farms (acres)	123,698	106,324	105,230	109,241
Average Size of Farm (acres)	88	82	80	72
Median Size of Farm (acres)	n/a	n/a	27	24

Source: NJDA 2007 Hunterdon County Agricultural Profile

Overall there are more farms in Hunterdon County in 2002 than in 1987, with the average farm size decreasing over that time. A comparison can be made between the average and median size of farms for both Hunterdon County and Union Township using farmland assessment data from 2008, which is shown in the below table.

Farm Assessed Properties	Number	Total Acres	Mean	Median
Union Township	159	3,837.78	24.14	13.10
Hunterdon County	5,158	13,6305.03	26.43	13.41

Source: 2008 Farmland Assessment Data

Both the average and median size of farms for Union Township are consistent with the average and median size of farms for those in Hunterdon County.

¹ Open Space and Recreation Plan for Township of Union, County of Hunterdon, Morris Land Conservancy, 2002

² United States Department of Agriculture, Natural Resources Conservation Service. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/>. Last accessed November 14, 2008.

³ Comprehensive Master Plan and Background Analysis Report for Union Township, Hunterdon County, NJ, 1984 amended 1999.

⁴ Evaluation of Groundwater Resources for Union Township, Hunterdon County, New Jersey. M² Associates Inc. February 1999.

⁵ New Jersey Highlands Council. Highlands Regional Master Plan. July 2008, page 80

⁶ New Jersey Department of Agriculture, State Agriculture Development Committee. New Jersey Farmland Assessment data. 2006. Hunterdon County – Union Township.

⁷ New Jersey Department of Agriculture, State Agricultural Development Committee. Farmland Assessment. Tax Years 1983, 1990, 2000, 2004, 2005, and 2006. Hunterdon County Summary.

⁸ New Jersey Department of Agriculture, State Agriculture Development Committee, 2007 Hunterdon County Agricultural Profile.

CHAPTER 2: AGRICULTURAL INDUSTRY IN UNION TOWNSHIP



The fertile land base of Union Township supports a stable, yet evolving, farming industry. The Township falls into the North and South Branch Raritan River Region, which is part of the larger Raritan Watershed. Union Township is located near the populous Hunterdon County towns of Clinton, Frenchtown, High Bridge Borough, Lebanon Borough, Glen Gardner Borough and Hampton Borough, which offer local farmers access to potential buyers and support businesses. Additionally, the various types of land in Union Township can support many forms of agriculture, including field crops, nursery, livestock, woodlands, and other kinds of farming. Agriculture continues to be a viable industry in Union Township.

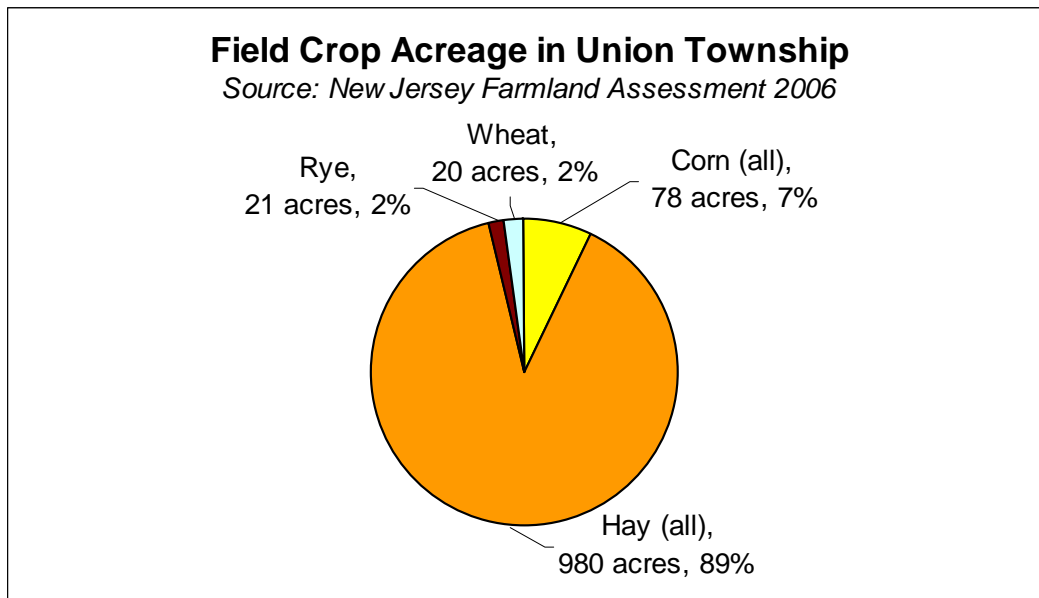
Agricultural History

Agriculture has been the historically dominant fixture in the landscape of Union Township. The Township developed as a rural, agricultural community with most of its early settlers establishing farmsteads along the area's main carriage route. The agricultural products that came from Union Township could be transported easily to the markets of Philadelphia and New York by land or water. The Morris Canal ran through nearby communities, and offered farmers access to bulk transportation for their products. The Lehigh Valley Railroad line, which runs through Union Township south of Interstate 78, was completed during the nineteenth century and facilitated the movement of agricultural goods from the Township as well.

Agriculture in Hunterdon County has always been described as diverse. Rich soils support a variety of agricultural uses, ranging from field crops, to produce, to equine, to dairy. Beginning in the 1960s, a number of factors combined to weaken the once strong dairy industry in Union Township and Hunterdon County. Today, the dairy industry no longer exists in Union Township, and has been diminished to a fraction of the land it used to occupy in the County as a whole. Field crops have always been traditionally strong in the Township and in recent years, nursery crops have become more common due to their high market value. Today, agriculture in Union Township is heavily oriented towards traditional field crops, especially hay and corn, but continues to remain diverse with an increasing number of nursery crops and equine.

Agricultural Production Trends^a

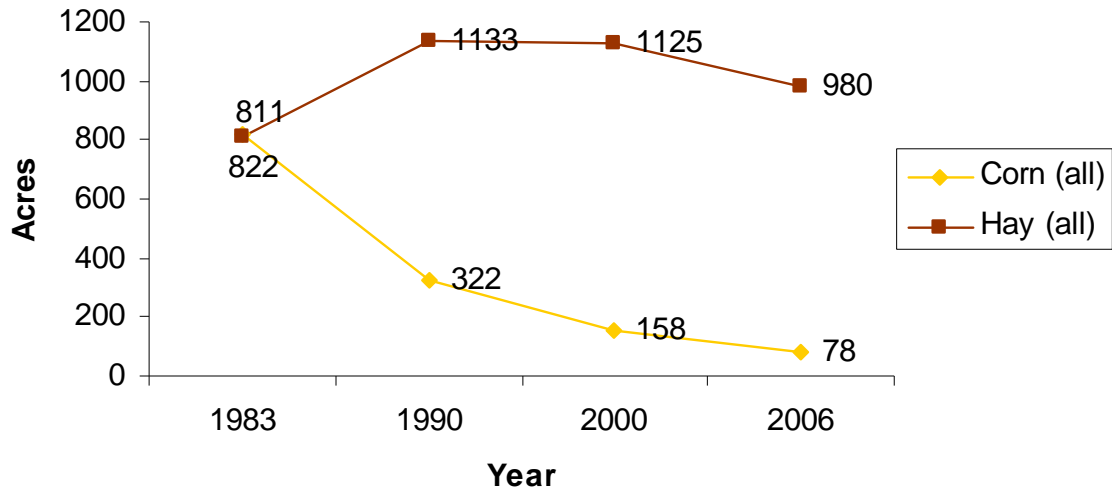
Corn and hay are the primary field crops in Union Township (see *Field Crop Acreage* chart below). (*NJDA Farmland Assessment data*)¹ Trends in the acreage of land planted for these two field crops are dictated by short-term and long-term market fluctuations. Short-term trends include seasonal weather conditions and prices of inputs, such as fertilizers and fuel. For instance, Hunterdon County's field crop production (and Union Township's by inclusion) was significantly affected by severe drought conditions during 1999, causing historically low outputs of corn and soybeans (see *Corn and Soybean Production* charts below). (*NJ Office of NASS*)² Long-term trends include availability of support services, land prices, and local demand for certain crops. With local support services (such as large animal veterinarians and supply stores) in shorter supply, local land prices steadily rising, and the declining dairy industry in the Township and County, it might be anticipated that long term trends for field crops could be problematic. However, even with the declining dairy industry and increasing development pressures in Union Township and Hunterdon County, the production of land-intensive hay has remained fairly constant over time. Farmers who grow hay have found a new market in the Township's equine industry. Small horse farms tend to be common, and are a major purchaser of hay, buying it up as quickly as it is grown. The high local demand for hay may explain why a normally low value and land intensive field crop continues to dominate the agricultural industry within the Township (see *Hay Production* chart below).



^a Agricultural production trends are not available at the municipal level. Land area calculations and livestock counts are the only municipal level figures that are available.

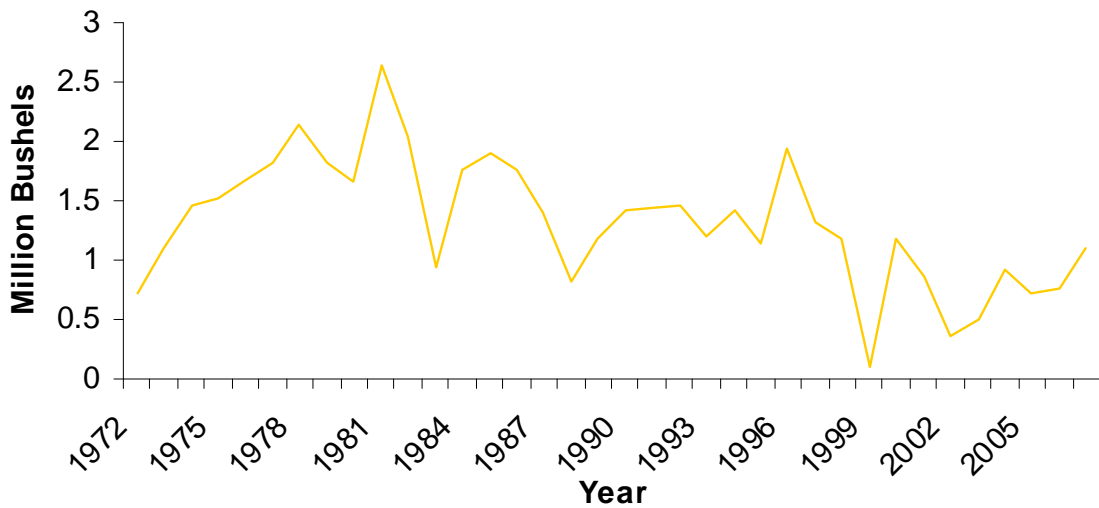
Field Crop Trend in Union Township: 1983-2006

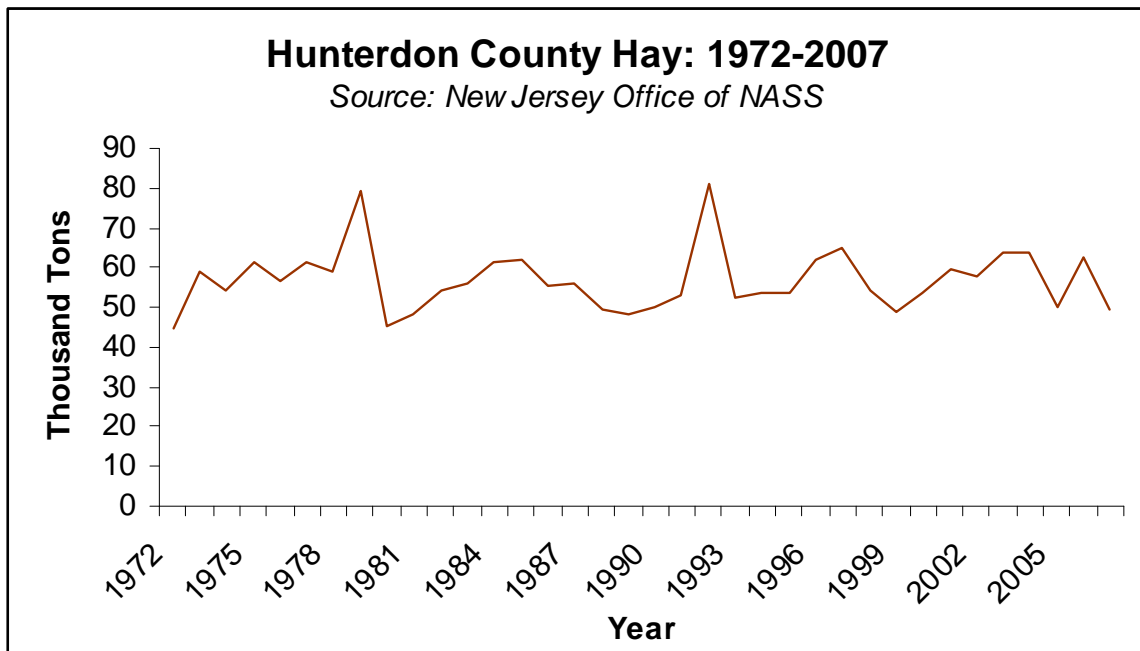
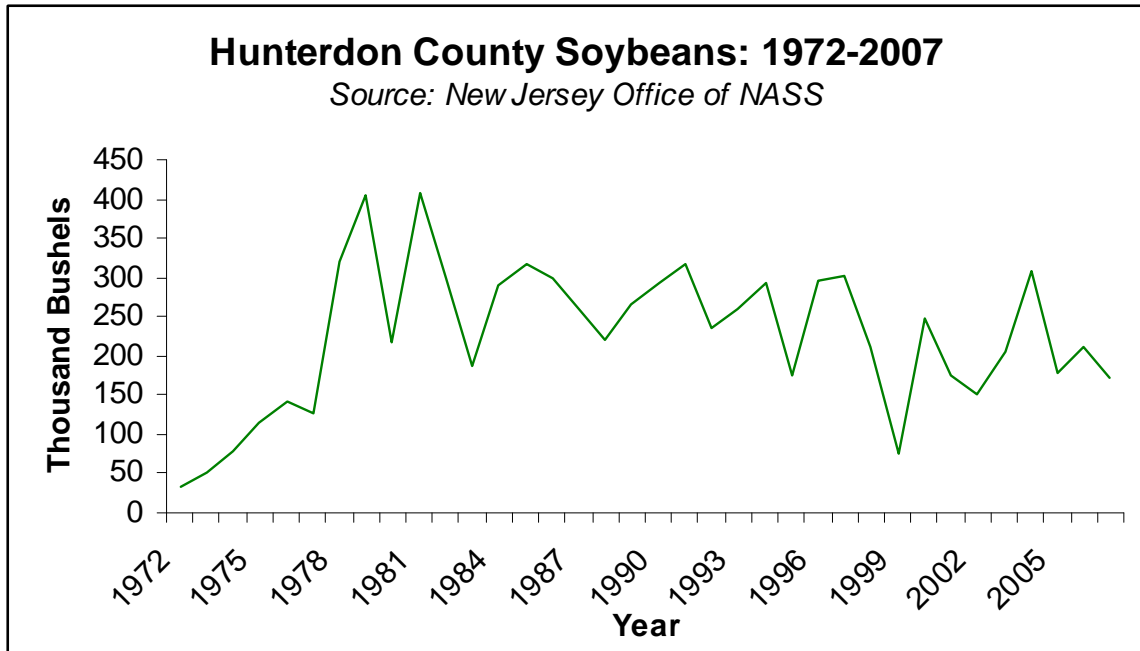
Source: New Jersey Farmland Assessment



Hunterdon County Corn for Grain: 1972-2007

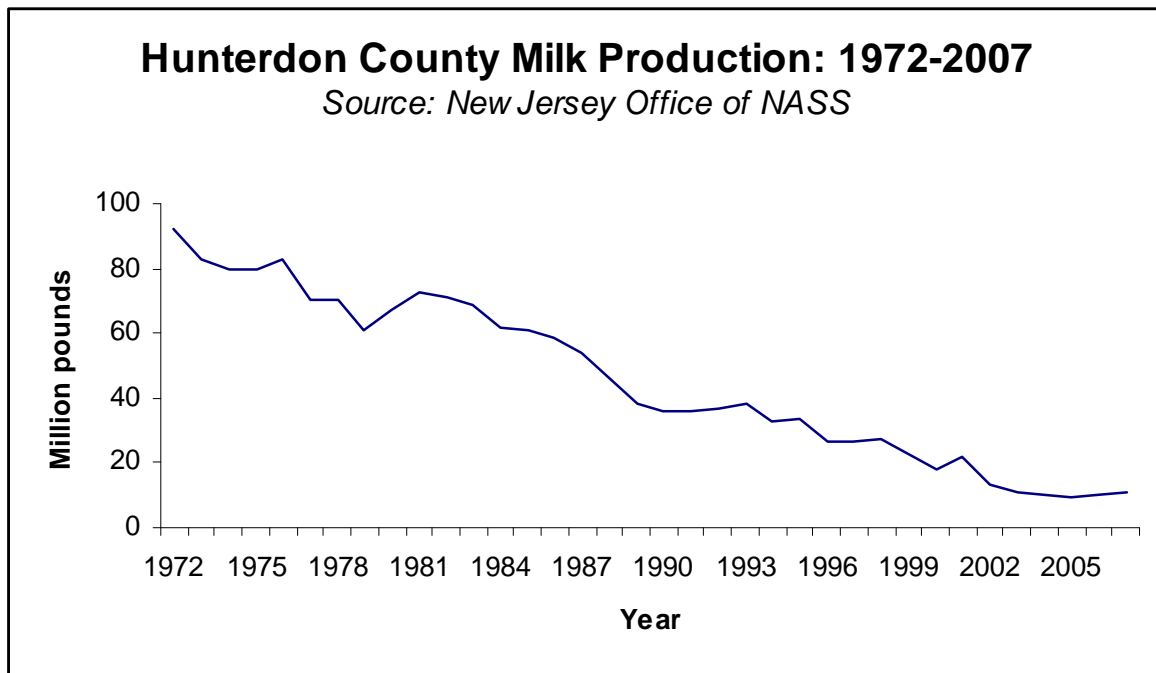
Source: New Jersey Office of NASS





The dairy and livestock industries in Union Township and Hunterdon County have experienced significant declines since the 1970's (see *Milk Production* chart below). Decreasing demand for their products and other unfavorable market conditions has driven dairy farmers out of Union Township. A combination of high input costs, historically low milk prices, and weather related losses in 2005 created a scenario that the New Jersey Department of Agriculture likened to "a perfect storm". (*2006 Annual Report of the NJDA*)³ Among the most significant input costs faced by New Jersey's dairy farmers are high land prices and property taxes. Dairy farms require more extensive plots of land

than most agricultural operations, and rising land prices and property taxes have made other uses of dairy land (such as growing field crops) more economically attractive to many farmers.

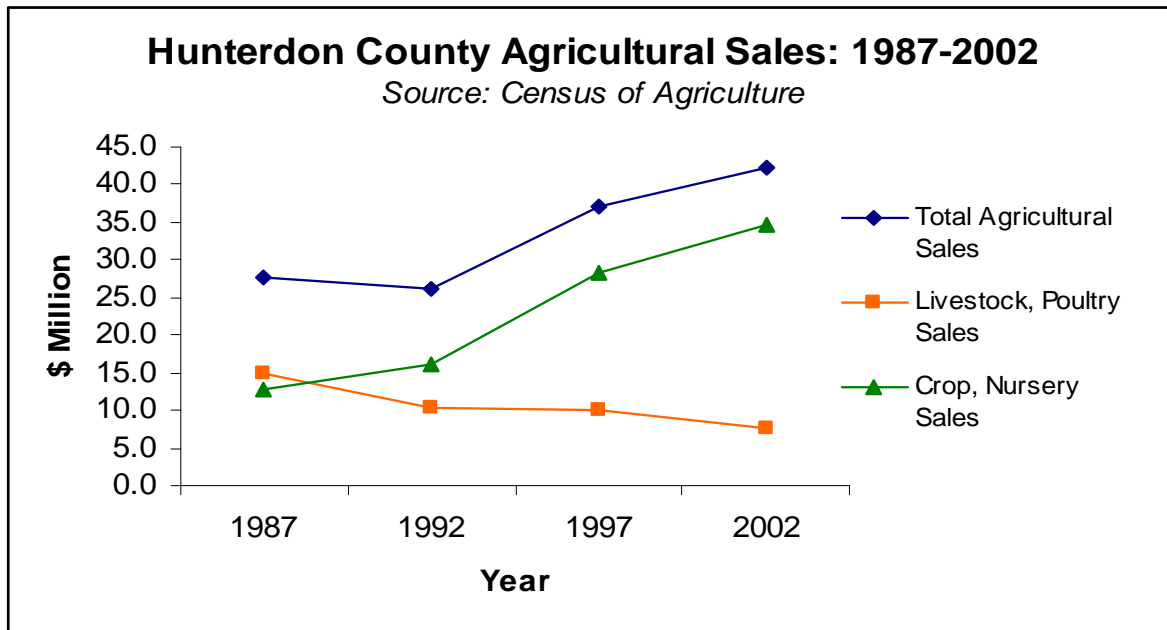


Erosion of the local supporting infrastructure has impacted dairy producers as well. After the demand from New York and Philadelphia for New Jersey dairy products dropped during the 1960's, many dairy support businesses relocated or closed. Consequently, there are no remaining creameries in Hunterdon County, which forces dairy producers to ship their products over considerable distances to be processed. This shipping, along with the spike in fuel prices for 2008, costs dairy farmers additional monies, cutting into their profit margins. Additionally, the shortage of large animal veterinarians in the region has made keeping livestock less feasible and more expensive (see *Dairy Cattle* chart below).

The expenses incurred by dairy farmers due to poor market conditions and inadequate support services have influenced the agriculture decisions for those that wish to remain in farming. Thus, many have transitioned their operations towards less infrastructure-intensive practices, such as field crop production. Many former dairy farmers have decided to discontinue farming, opting instead to sell their farms. This breakdown in the overall support structure is the primary reason the dairy industry no longer exists in Union Township.

Agricultural Sales Trends^b

The Census of Agriculture separates agricultural activities into two categories: “livestock, poultry and their products” and “crops, including nursery and greenhouse products”. “Livestock, poultry and their products” from Hunterdon County produced \$7.56 million in sales during 2002, down from \$7.9 million in 1997. Sales from the “crops, including nursery and greenhouse products” category were up 19% from \$28.15 million in 1997 to \$34.7 million in 2002. (*Hunterdon County Census of Agriculture 2002, 1997*)⁴ High value nursery and greenhouse crops, which can be grown on smaller parcels of land and have a high market value, are responsible for the increase in sales. (*Hunterdon County Census of Agriculture*) Though overall sales figures are not available at the municipal level, it is likely that upward trending sales figures can also be expected for the Township.



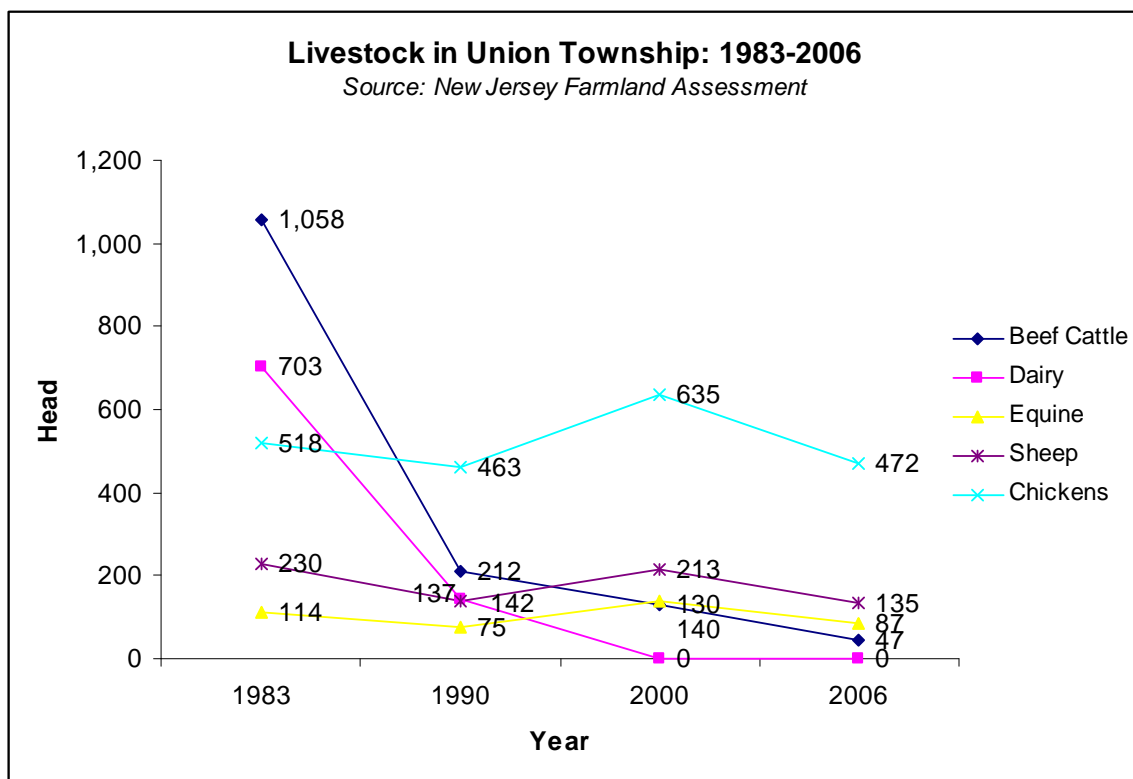
Livestock and Poultry Products

Even with declining sales, livestock serves as an economic contributor to the agricultural economy of Hunterdon County. Hunterdon County was ranked number one in the state of New Jersey for sales of cattle and calves. The livestock industry helps support field crop production as well because much of the grain and hay that is produced in Hunterdon County is sold to, or grown by, local dairy or livestock farmers to feed their herds. Consequently, the viability and continued growth of the County’s livestock farms are fundamentally important to the region’s agricultural industry as a whole.

^b Agricultural Sales figures are only calculated at the County level every five years. Much of the data and text in this section has been taken from the *Hunterdon County Comprehensive Farmland Preservation Plan*.

Milk production trends show that the decline in Hunterdon County's dairy industry has been occurring gradually for some time. The County's sales from milk production keep decreasing with each coming year (see *Milk Production* chart above). The reasons for this declining milk production – improvements in refrigerated transportation technology, falling milk prices, lack of a local creamery, rising land and fuel prices, lack of support services - have all contributed, and are discussed earlier in this chapter.

Among large livestock, there are 135 sheep in Union Township. The next most abundant large livestock is equine (87), followed by beef cattle (47), pigs (16) and goats (14). Among small animal livestock, egg chickens are the most abundant with 422, follow by meat chickens (50). (2006 NJDA Farmland Assessment data)



Crops, Including Nursery and Greenhouse

Crops in Hunterdon County sold for a total of \$34.7 million in 2002, slightly more than in 1997. Within this category of agricultural products, nursery and greenhouse operations have become the County's highest grossing subsector. Sales of nursery and greenhouse products, including sod, account for roughly 59% of the County's agricultural sales, which corresponds to \$24.79 million. Approximately 63 acres of land in Union Township was occupied by nursery products in 2006. These include Christmas trees (41 acres), trees and shrubs (19 acres), cut flowers (2 acres), and bedding plants (1 acre). (2006 NJDA Farmland Assessment data)

Due to irrigation, Hunterdon County nursery and greenhouse yields are not as adversely affected by drought conditions as yields of other field crops, and thus their share of Hunterdon County's crop sales may be somewhat inflated. However, likely due to increased demands from the growing residential sector of Union Township, Hunterdon County, and environs, the nursery and greenhouse industry has experienced far more growth than any other agricultural sector in the County over the last 20 years. A continued upward trend is likely.

Vegetables were the County's fifth highest earning crop during 2002 with \$1.7 million in sales. Approximately 46 acres in Union Township were planted with vegetables during 2006, with the largest acreages devoted to sweet corn (26), and pumpkins (8). Also present are other/mixed vegetables (1 acre), cucumbers (1 acre), asparagus (2 acres), tomatoes (3 acres), melons (2 acres), snap peas (1 acre), and peas (2 acres). The overall acreage of vegetables has fluctuated over time within Union Township. Vegetables do not require as much land as other field crops, and most vegetable-producing farms use only a few acres or less for each type vegetable. While vegetables account for a large percentage of Union Township's and Hunterdon County's agricultural sales, the expenses incurred by the County's vegetable farmers tend to exceed those of other farmers. Vegetables require more intensive irrigation than most field crops, and usually require seasonal laborers during their harvest. These additional expenses reduce the overall profit derived from vegetable production compared with similar sales of other field crops.

Census data for specific crop sales was not available for Hunterdon County before 1997 according to the NASS. As such, an analysis of trends in crops sales is unavailable.

The **grains** subcategory encompasses corn for grain and silage, and soybeans. These were Union Township's second most common field crops in terms of acres planted in 2006 (52 acres). Sales from this subcategory were heavily influenced by extreme weather conditions during the 1999 drought, which reduced the available supply to historically low levels. Grains have traditionally been the highest selling field crops among the County's farms. They are likely to remain the most common products in Union Township, particularly with the increased importance of corn for ethanol production.

A significant portion of Hunterdon County's agricultural sales come from **hay**. Hunterdon County produced roughly 49,000 tons of hay during 2007, which was the highest hay yield in the state. Occupying 882 acres, hay is the dominant crop present in Union Township. (2006 NJDA Farmland Assessment data)

Hunterdon County is home to many **fruit** farms as well. These farms are currently experiencing a surge in production. In 2007, Hunterdon County produced roughly 3 million pounds of apples— almost three times more than it did since the start of data collection in 1972. The increasing popularity of pick-your-own operations may have contributed to this increase. In 2006, Union Township contained 9 acres of land that support apple orchards (4 acres), nectarines (2 acres), and “other” fruit, peaches, and

pears (1 acre each). The types and acreage of fruit grown in Union Township has varied greatly since 1983. (2006 NJDA Farmland Assessment data)

In summary, Union Township's agricultural sector is consistent with and supports Hunterdon County's overall agrarian economy and land base. With most of Union Township's acreage in hay, this supports the changing (and more profitable) agricultural equine industry which is growing throughout Hunterdon County. Corn will continue to be a profitable sector for both the Township and County as alternative energy in the form of ethanol takes hold in New Jersey and its larger environs.

Agricultural Support Services and Related Industries

The agricultural support services in Union Township and Hunterdon County are predominantly oriented towards supplying the raw materials necessary for farming. They include businesses such as tractor sales and supply stores, feed vendors, and hardware/equipment retailers. Agricultural support operations are scattered throughout Hunterdon County, rather than being concentrated in a single location. Some local equipment and tractor retailers close to Union Township are Tractor Supply (Raritan), Powerco (Clinton), D&R Equipment (Ringoes), and The Country Mechanic (Ringoes). Also, local hardware and grocery stores throughout Hunterdon County serve as vendors for farming goods and supplies.

Local support businesses are often insufficient to meet the needs of the Township's agricultural community. Consequently, local farmers have become adept at minimizing the need for many outside repair services by addressing a variety of mechanical problems themselves. Also, farmers tend to specialize in certain types of agricultural repair, supplementing their incomes by offering their services to other farmers.

The Township's farmers also rely heavily upon mail order and out-of-state retailers for their agricultural supplies. Processing facilities such as creameries and lumber mills are now absent from the area, forcing farmers to ship their products out-of-town to be processed. Some farmers have found that reliance upon out-of-state suppliers and non-local processing facilities impose transportation costs that cut deeply into their operations profitability, though mail order is often an option that minimizes transportation costs.

Despite the loss of many support businesses from the region, local farmers still benefit from the wide range of these services throughout Hunterdon County, northern New Jersey, and eastern Pennsylvania. The Rutgers Cooperative Extension of Salem County has compiled a comprehensive listing of all the agriculture-related businesses, organizations, and markets in the State of New Jersey called the *Green Pages*. (*Green Pages*)⁵ The agricultural businesses listed in these Green Pages which are located in, or around Hunterdon County, are provided on the following page. *Chapter 6* includes more detailed information regarding where farmers take their agricultural products for processing and/or direct sale to consumers.

Agricultural Businesses Servicing Hunterdon County, New Jersey	
<i>Source: Rutgers Cooperative Extension of Salem County, New Jersey</i>	
Certified Crop Advisors	Feeds (Continued)
Richard Klevz	Soho Feeds & Pets
40 Saddle Shop Rd.	254 Rt. 202-31
Ringoes, NJ 08551	Flemington, NJ 08822
Phone: (908) 479-4500	Phone: (908) 782-6060
E-mail: Debrick40@aol.com	
	The Tack Room
Construction	Main St.
Parker Landscaping Construction Inc.	Pittstown, NJ 08867
Califon, NJ	Phone: (908) 730-8388
Phone: (973) 638-3483 or (908) 832-9007	
	Fertilizers, Lime, Chemicals, Supplies
Crop Insurance Agents	Crop Production Services
GS Newton Associates	127 Perryville Rd.
7 Maple Ave.	Pittstown, NJ 08867
Flemington, NJ 08822	Phone: (908) 735-5545
Phone: (908) 788-9080	E-mail: cpsjutland@agriumretail.com
	Website: www.cropproductionservices.com
Equipment (New, Used, Parts, Service)	
4-T's Farm	Financial Services
1 Stone Sign Post Road	First Pioneer Farm Credit, ACA
Flemington, NJ 08822	North Jersey Division
Phone: (908) 782-0688	9 County Road 618
	Lebanon, NJ 08833-3028
Powerco, Inc.	Phone: (908) 782-5011
12 Route 173	NJ: 1-800-787-FARM (3276)
Clinton, NJ 08809	Website: www.firstpioneer.com
Phone: (800) 232-7232	
	Large Animal Veterinarians
D&R Equipment Inc.	Cokesbury Equine
Rt. 579	Andie Butler, D.V.M
Ringoes, NJ 08551	177 Old Cokebury Rd.
Phone: (908) 782-5082	Lebanon, NJ 08833
	Phone: (908) 236-8097
Feeds	
R Industries Incorporated	Dr. Reynolds
109 Stanton Rd	Pittstown, NJ 08867
Flemington, NJ 08822	Phone: (908) 735-9332
Phone: (908) 236-2861	
	Dr. Roeing
Roddy MacR Feed	Glen Manor Veterinary Hospital
109 Stanton Rd	Glen Gardner, NJ 08826
Flemington, NJ 08822	Phone: (908) 537-7663
Phone: (908) 236-2861	

¹ New Jersey Department of Agriculture, State Agriculture Development Committee. New Jersey Farmland Assessment data. 1983, 1990, 2000, and 2006. Hunterdon County – Union Township.

² New Jersey Office of the National Agriculture Statistics Service. Data available online at: http://www.nass.usda.gov/Statistics_by_State/New_Jersey/index.asp . Accessed November 2008.

³ New Jersey Department of Agriculture. New Jersey Agriculture 2006 Annual Report. www.state.nj.us/agriculture/pdf/06AnnualReport.pdf

⁴ New Jersey Department of Agriculture, New Jersey Agricultural Statistics Service. Census of Agriculture County Profile. 1997, 2002. Hunterdon County.

⁵ Rutgers Cooperative Extension of Salem County. Green Pages: An Agricultural Resource Guide. Online at: <http://saalem.rutgers.edu/greenpages/index.html> . Accessed November 17, 2008.

CHAPTER 3: LAND USE PLANNING CONTEXT OF UNION TOWNSHIP



Land Use Patterns

The land use patterns of Union Township are a combination of large agricultural fields, residential development, a small commercial sector, and a vast expanse of preserved open space and state parks. Union Township's history is based in agriculture, its rich soils drawing farmers to settle there during the 17th and 18th centuries. The Union Furnace, from which the Township draws its name, was built in 1742. The historic communities of Pattenburg, Jutland, and Norton developed as the Township's population grew.

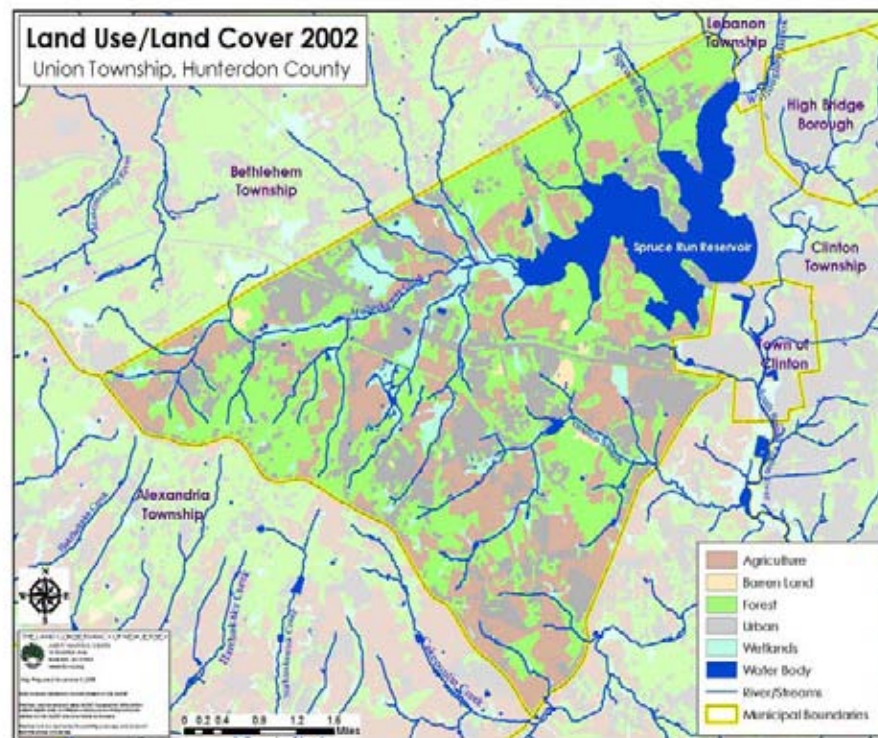
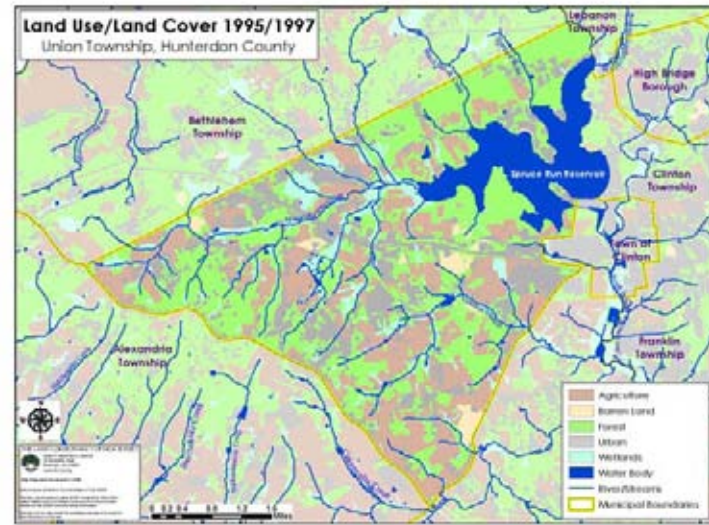
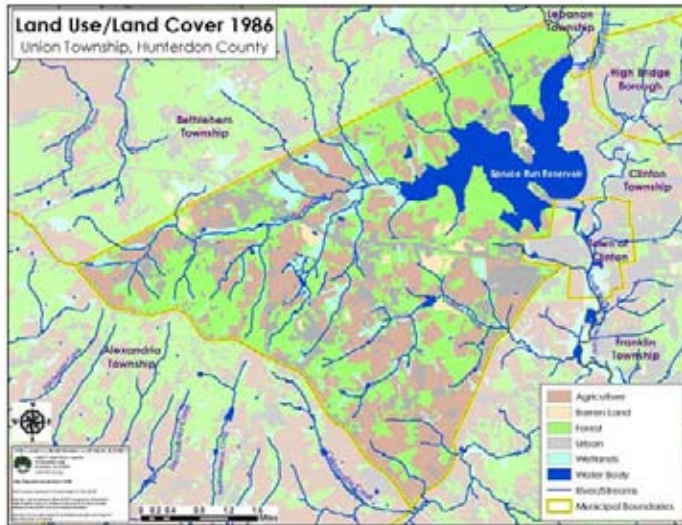
Following World War II, suburban-style development expanded westward from New York City, and then eastern New Jersey. These development patterns were promoted by government incentives that encouraged the construction of single-family homes, and the construction of Interstate highways, including Interstate 78 (I-78), that greatly increased the ease of living in rural communities, away from traditional employment centers.

Today, the I-78 corridor maintains the most notable concentrations of commercial development in Union Township. The Edna Mahan Correctional Facility for Women occupies a large stretch of land along I-78, along with several large commercial complexes. The highway corridor is the center of commercial development in the Township.

The Township has utilized cluster zoning to deed-restricted farmland properties, these are scattered throughout the Township and also contain notable concentrations of residential development. Located in the southeast and southwest corners of Union Township, these areas were designed to promote the preservation of farmland, while at the same time, allowing for residential areas to exist nearby. The majority of residential development in Union Township is located south of I-78.

Development Pressure

Union Township has experienced substantial growth in recent years. Union Township's population has almost quadrupled since the beginning of World War II, increasing at the greatest rate during the 1970s (see *Population* chart below). The Township is ranked fourth in population out of the County's 26 municipalities. (2000 Census)¹ Areas with high population density are scattered throughout the Township, with a noticeable cluster around the Interstate 78 corridor. Urban land cover has increased in recent years, replacing some of the Township's valuable farmland (see *Land Use/Land Cover* maps and charts below).

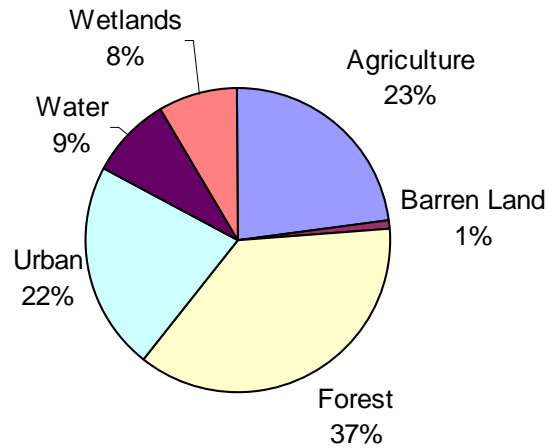


LU/LC 1986	Acres	Percent	LU/LC 1995/97	Acres	Percent	LU/LC 2002	Acres	Percent
Agriculture	3,810.06	29.0	Agriculture	3,275.72	24.9	Agriculture	3,029.98	23.0
Barren Land	216.44	1.6	Barren Land	227.53	1.7	Barren Land	96.03	0.7
Forest	4,805.64	36.6	Forest	4,874.02	37.1	Forest	4,818.40	36.7
Urban	2,037.98	15.5	Urban	2,503.57	19.0	Urban	2,940.70	22.4
Water	1,142.71	8.7	Water	1,143.96	8.7	Water	1,171.55	8.9
Wetlands	1,133.62	8.6	Wetlands	1,121.65	8.5	Wetlands	1,089.79	8.3

Source: NJDEP Land Use/Land Cover for 1986, 1995-1997, and 2002

Land Cover Type in Union Township

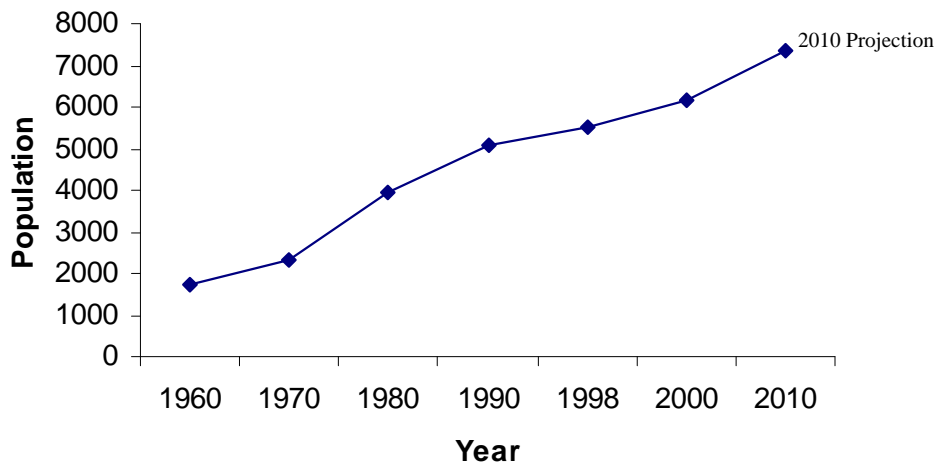
Source: NJDEP Land Use/Land Cover



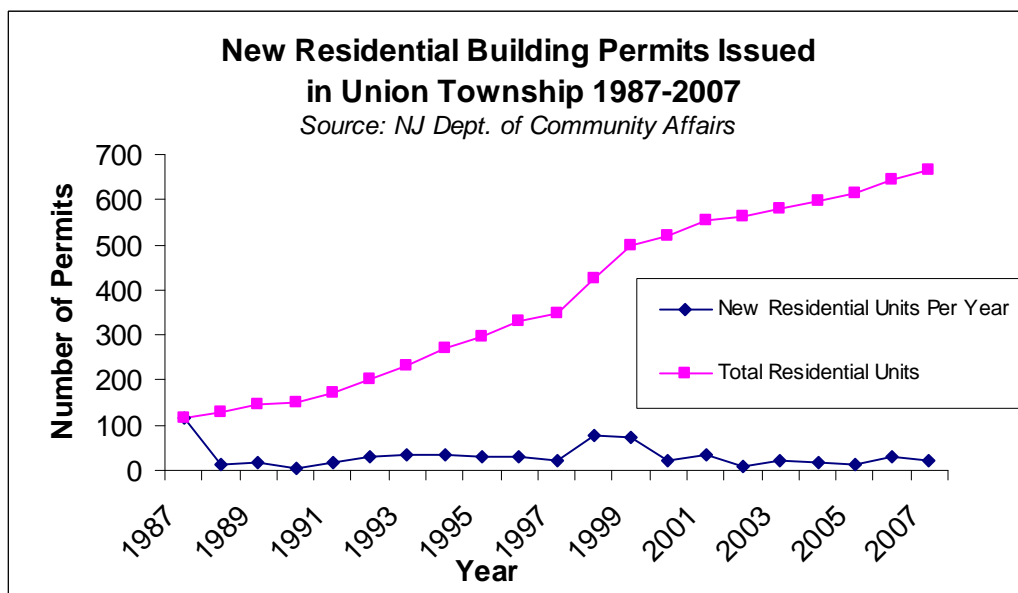
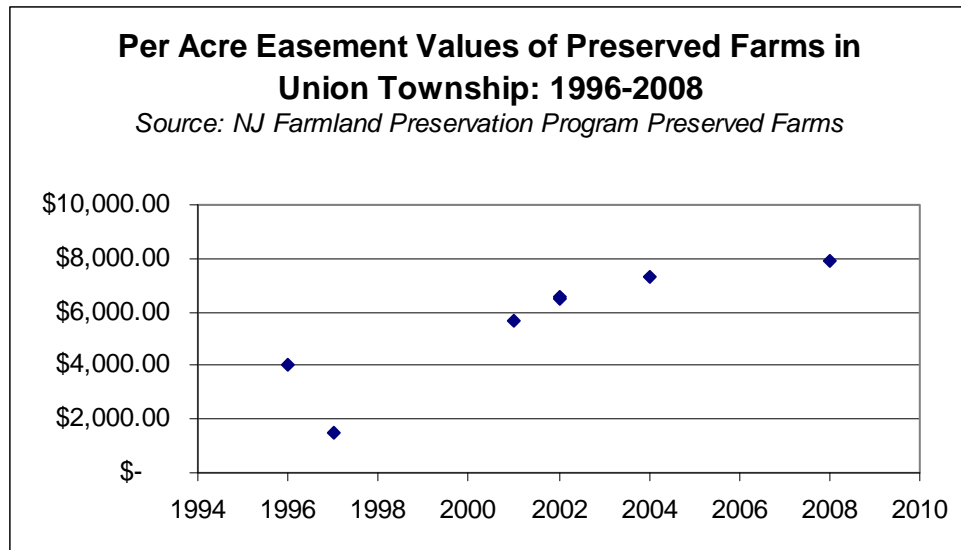
Source: NJDEP Land Use/Land Cover for 2002

Population of Union Township

Source: US Census Bureau. WNJPIN



Land values have increased sharply since 1996 when the first farm was preserved in Union Township. Per-acre easement values paid to preserve farmland in the Township have almost doubled from \$4,000 per acre for the purchase of the Bowers Farm in 1996 to \$7,917 per acre for the Gyuro-Sultzer farm in 2008 (see *Per Acre Easement Value* chart below). While the number of new residential building permits issued per year has stayed fairly constant, continued building has lead to an increased number of residential buildings in the Township over time (see *New Residential Building Permits Issued* chart below).



Public Infrastructure – Sewer and Water

The majority of Union Township residents rely on individual septic systems and site specific wells for their water and wastewater disposal needs. There are two wastewater treatment facilities operating in Union Township, one owned by the Union Township Board of Education which services the school and the other by the Village Square Homeowners Association. (*Gary Torres*)² Based upon a GIS analysis of these existing wastewater service areas, (totaling 153 acres within the Township), and overlying the active agricultural land layer (based upon the NJDEP tillable land layer), 69 acres of active agricultural land fall within the existing wastewater service areas. None of these lands are within the County Agricultural Development Area (ADA) or Project Areas for the Township (see *Chapters 4 and 5* for more information on the County ADA and municipal project areas).

Several of the commercial and residential developments along I-78 utilize the Town of Clinton Wastewater Treatment Plant and public water supply. Future growth of sewer services areas could be considered for areas that contain cluster zoning. (*Union Township Master Plan*)³ Based upon a GIS analysis, 11.64 acres of active agricultural land fall within the area to be served by future wastewater service. These lands are located along I-78 and are not in conflict with agricultural preservation efforts as they fall outside of the identified farmland project areas.

The Township recently completed a build-out analysis as part of the *New Jersey Highlands Regional Master Plan* Conformance process. Areas served by wastewater and potable water utilities were researched and mapped. (*see Highland Council Maps Figures 3 and 4 reproduced below and on the following page*) The Highlands criterion was specific to areas served which are “on line” and currently contributing to the utility flow. It did not take into account those projects which have final approvals or have sewer agreements for future development. One site in particular, owned by Foster Wheeler has a long term preliminary approval and the expectation for future sewer/water service. This site is indicated on the map below, entitled Figure 3.

The Highlands Council generated a utility capacity report as a result of the build-out analysis which details water and sewer capacity for Union Township, which has not been independently verified by Union Township. (*Table 1 is reproduced below on the following page*) The relevant data on existing service areas is found in the last column labeled Municipal Available Wastewater Capacity and Municipal Available Water Utility Capacity.

Figure 3: Municipal Build-out Report RMP HDSF Wastewater Utilities

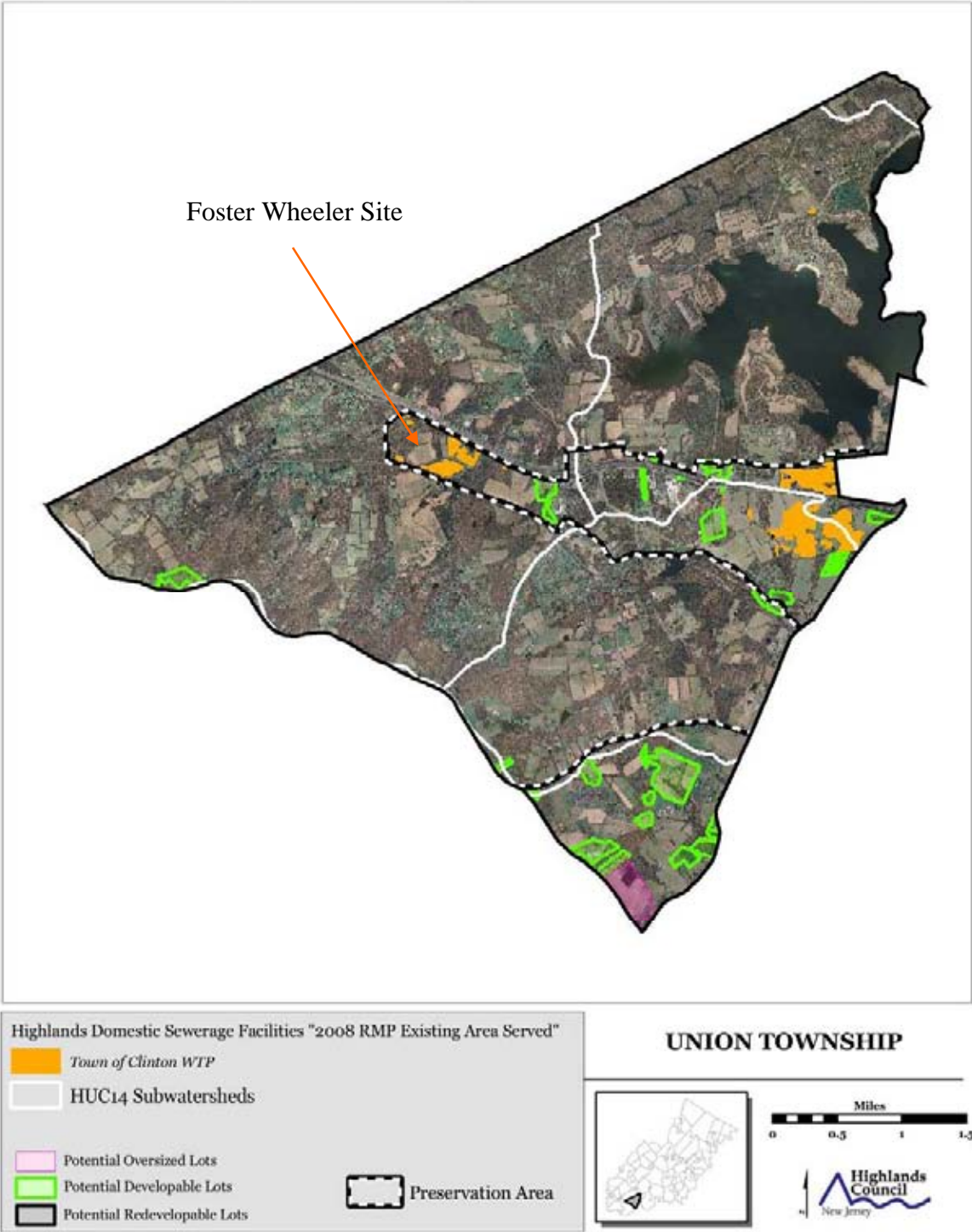
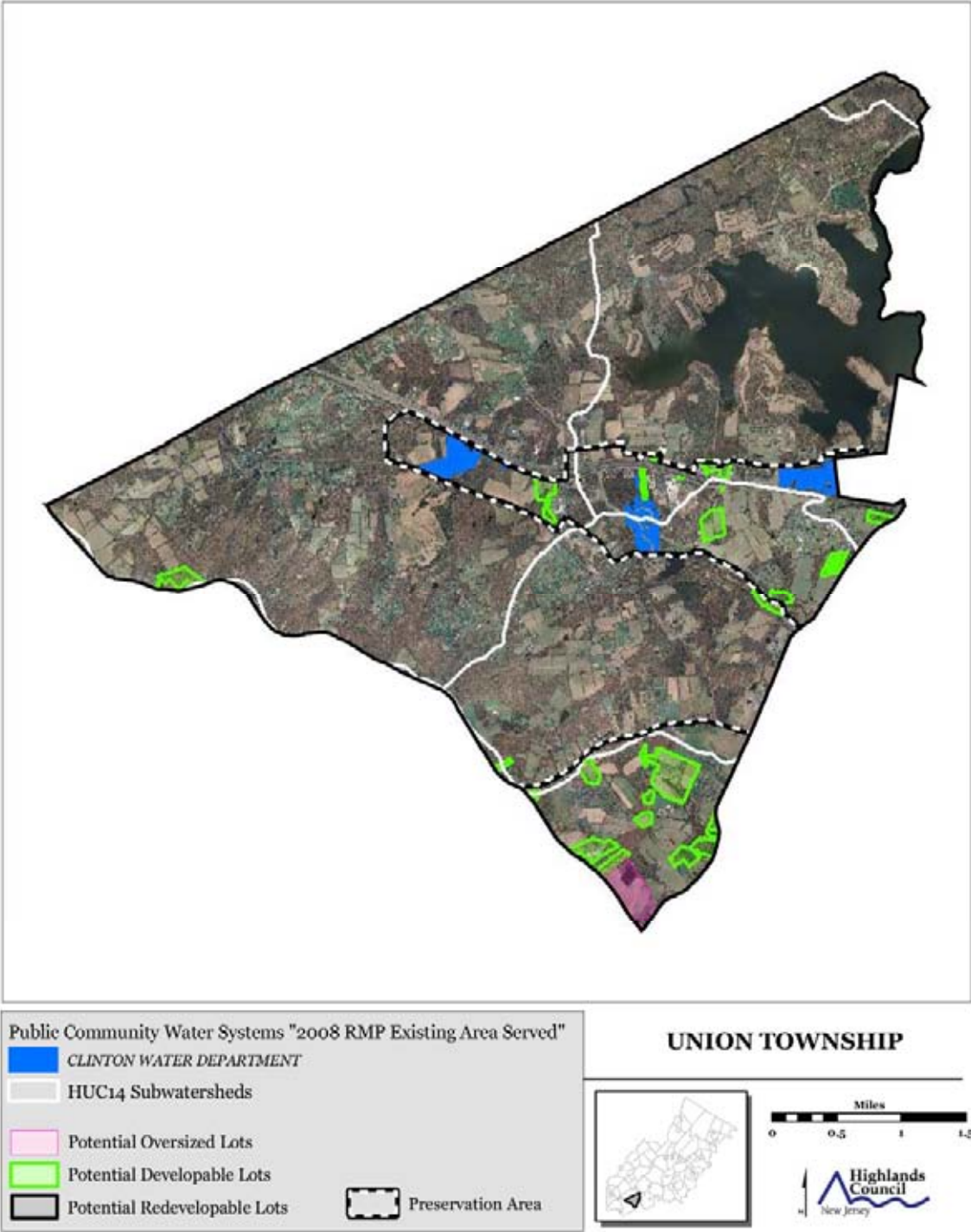


Figure 4: Municipal Build-out Report RMP Public Community Water System Utilities



Highlands Module 2 Municipal Summary Report
Table 1: RMP Municipal Capacity Conditions based on Module 2 Potential Developable Lands- UNION TOWNSHIP
RMP Build-Out WASTE WATER UTILITY Existing Areas Served (EAS) Analysis

MUNICIPALITY	WASTEWATER UTILITY	Total Wastewater Generation (MGD) - Planning Area	Total Wastewater Generation (MGD) - Preservation Area	Municipal Assigned Percentage	Current Available Highlands Capacity (MGD)	Municipal Available Wastewater Capacity (MGD)
UNION TOWNSHIP	N0020389 / Town of Clinton WTP / HOSF	0	0	11%	0.467	0.214
UNION TOWNSHIP	N0024091 / Union Twp SOE / NON-HOSF	0	0	Non-HOSF	Non-HOSF	Non-HOSF
RMP Build-Out POTABLE WATER UTILITY Existing Areas Served (EAS) Analysis						
MUNICIPALITY	WATER UTILITY	Total Water Demand (MGD) - Planning Area	Total Water Demand (MGD) - Preservation Area	Municipal Assigned Percentage	Water Utility Available Capacity (MGd)	Municipal Available Water Utility Capacity (MGd)
UNION TOWNSHIP	1005001 / CLINTON WATER DEPARTMENT / Facility #3	0	0	20%	61	12.2
RMP Build-Out WASTEWATER UTILITY Existing Areas Served (EAS) Analysis Build-out Impact Results						
MUNICIPALITY	WASTEWATER UTILITY	Residential Units	Nonresidential Square Feet	People	Jobs	
UNION TOWNSHIP	N0020389 / Town of Clinton WTP / HOSF	0	0	0	0	
UNION TOWNSHIP	N0024091 / Union Twp SOE / NON-HOSF	0	0	0	0	
RMP Build-Out WATER UTILITY Existing Areas Served (EAS) Analysis Build-out Impact Results						
MUNICIPALITY	WATER UTILITY	Residential Units	Nonresidential Square Feet	People	Jobs	
UNION TOWNSHIP	1005001 / CLINTON WATER DEPARTMENT / Facility #3	0	0	0	0	
RMP Build-Out Septic System Yield Analysis						
Planning Area	HUC14	SUBWATERSHED NAME	PLAN C2 YIELD	PLAN EC2 YIELD	PLAN P2 YIELD	
UNION TOWNSHIP	01030105020030	Mulhockawau Creek	0	0	0	
UNION TOWNSHIP	01030105020040	Spruce Run Reservoir / Willoughby Brook	0	1	0	
UNION TOWNSHIP	01030105020060	Collepoulin Creek	17	0	0	
UNION TOWNSHIP	01030105020070	Rantan R 500' over Rd to Spruce Run	3	0	0	
UNION TOWNSHIP	01040105120020	Mash-sake Creek	0	0	0	
UNION TOWNSHIP	01040105120030	Hartfokake Creek (land to Mashfokake Ck)	0	0	0	
UNION TOWNSHIP	01040105120040	Nichulanick Creek (above 40d 33m)	0	0	0	
Totals:			20	1	0	
Preservation Area	PRES YIELD					0
UNION TOWNSHIP						0

Source: Highlands Council

Land Use Planning Initiatives

Union Township has been the subject of extensive and sustained land use planning efforts undertaken by all levels of government. Through the *State Development and Redevelopment Plan* and the *Highlands Regional Master Plan*, New Jersey has recognized Union Township as the location of prime agricultural and natural resource lands.

State Development and Redevelopment Plan^a

The New Jersey State Planning Commission has drafted the *State Development and Redevelopment Plan* (SDRP) that outlines general policy objectives concerning land use and future development in the State. (*2001 NJ State Development and Redevelopment Plan*)⁴ The SDRP identifies five Planning Areas within the State where different sets of goals and guidelines are considered appropriate to determine development activities (see *NJ State Development and Redevelopment Plan* map below). These Planning Areas are labeled as Metropolitan, Suburban, Fringe, Rural and Environmentally Sensitive lands.

The SDRP also identifies Designated Centers where future development and redevelopment activities are most appropriate and will be actively promoted. Centers are categorized as Urban Centers, Regional Centers, Towns, Villages, and Hamlets corresponding to criteria including size, regional location, population, residential and employment densities, and available housing stock. The combination of Planning Areas and Designated Centers establishes a comprehensive framework for pursuing land use and development regulation throughout New Jersey.

Metropolitan Planning Areas (PA1) are comprised of the most intensely developed regions in the state. The goals in this planning area revolve around revitalizing existing cities and towns by encouraging compact growth and redevelopment. The Metropolitan Planning Area is identified as the most appropriate location for future development in New Jersey. Union Township does not contain land within the Metropolitan Planning Area.

Suburban Planning Areas (PA2) are called upon to support most of the new development that will occur in New Jersey while maintaining the character of existing communities there. Growth in suburban town centers is especially encouraged in order to help protect and preserve the natural resources that exist in these areas. The Suburban Planning Area is meant to complement metropolitan areas, and is most commonly found outside heavily urban areas. Union Township contains 1,710 acres (13%) of land within the Suburban Planning Area along the I-78 corridor.

^a Note: This section of the Plan is written using the approved and adopted State Development and Redevelopment Plan. This Plan is in the process of being updated and the maps and analysis in this section do not reflect the current Draft Updates to the State Development and Redevelopment Plan. As of January 2010, Union Township, through the cross-acceptance process and included within the latest Draft Plan will no longer have land within the municipality designated as “Planning Area 2”.

Fringe Planning Areas (PA3) serve as an appropriate interface between suburban and rural areas. They are not as developed as metropolitan and suburban areas, but support more development activity than nearby rural lands. Fringe Areas play the important role as a buffer between these largely incompatible land uses. Consequently, they are often the frontlines of urban sprawl, and must be carefully planned to ensure that development is appropriately restricted to existing urbanized areas. Union Township does not contain any land within the Fringe Planning Area.

Rural Planning Areas (PA4) are suitable for the preservation of large contiguous areas of farmland. Sustaining the agricultural industry while confining development and redevelopment within existing towns are included among the policy objectives applicable to these areas. Union Township contains less than one acre of land within the Rural Planning Area.

Rural-Environmentally Sensitive Planning Area (PA4B) is a subset of the Rural Planning Area. Lands in this Planning Area are suitable for agriculture but also contain environmentally sensitive features, such as steep slopes, critical wildlife habitats and underground aquifers. There are 3,850 acres of land in the southeast and southwest corners of Union Township that fall into this category.

Environmentally Sensitive Planning Areas (PA5) contains lands where natural resource preservation should be the primary planning consideration. Development should be minimized or constrained to existing centers while large contiguous natural areas should be preserved as open space. Large areas of Union Township fall within the Environmentally Sensitive Planning Area, mostly in the north and west portions. This Planning Area occupies approximately 4,429 acres (34%) of the Township. Union Township also has 2,093 acres of its land (16%) in State Park land. (See *Planning Areas in Union Township* chart and map below).

Acres of Active Agricultural Lands within New Jersey State Planning Areas

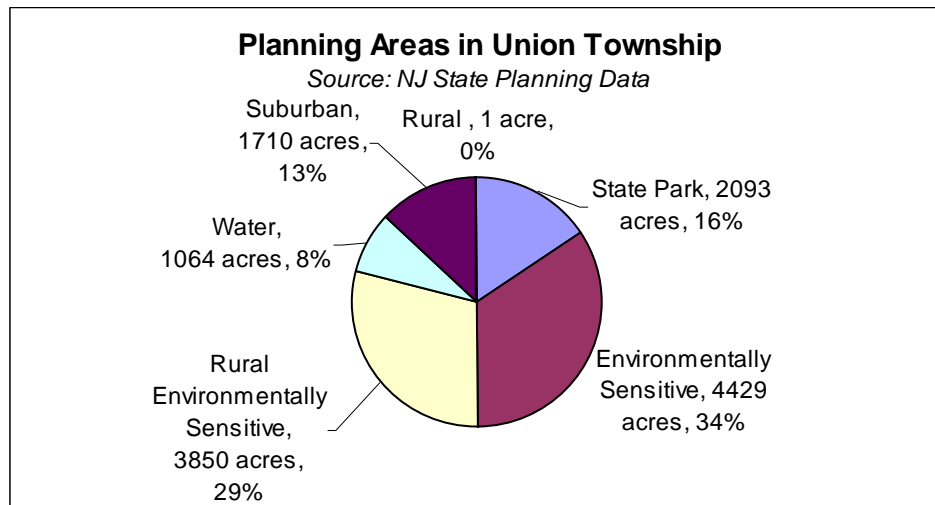
Planning Areas	Total	Active Agriculture	Percent of Active Agricultural Areas
Rural Sensitive	3,850.03	1,456.26	37.82
State Park	2,092.60	543.09	25.95
Suburban	1,710.46	399.81	23.37
Environmental Sensitive	4,428.62	732.54	16.54

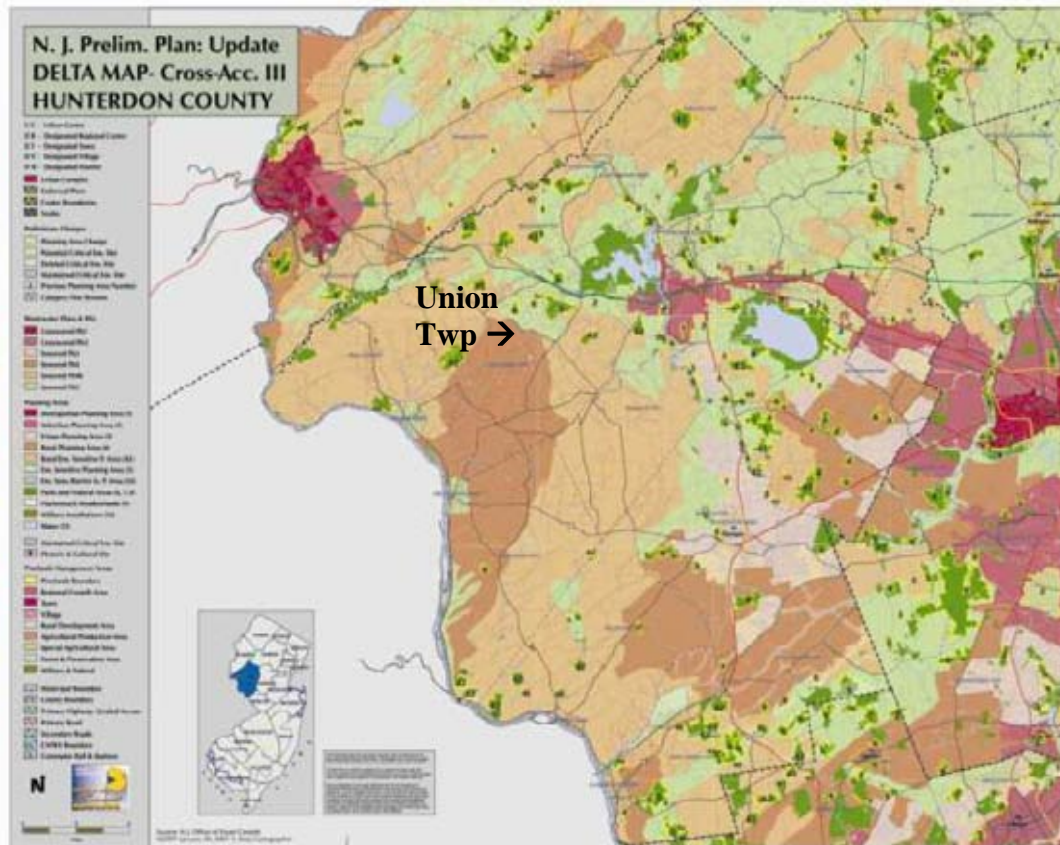
Source: NJ State Plan and NJDEP 2002 Land Use/Land Cover

Centers are defined by the New Jersey State Planning Commission as “compact forms of development that, compared to sprawl development, consume less land, deplete fewer natural resources and are more efficient in the delivery of public services.” (*SDRP*) Centers become *proposed* and then *designated* after the municipalities or counties that encompass them submit development plans to the State Planning Commission, which are subsequently endorsed by the Office of Smart Growth. Union Township does not contain any Proposed or Designated Centers. However, there are three *identified* centers –

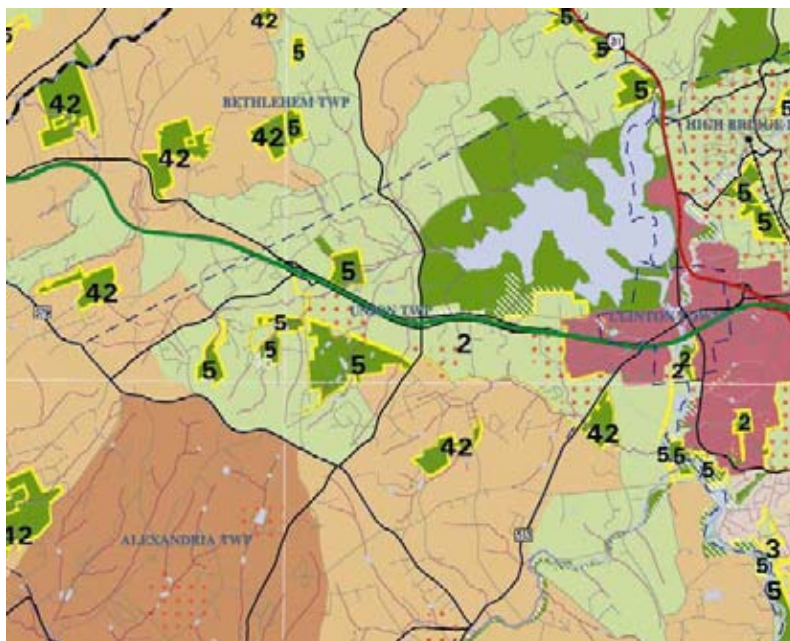
Jutland, Pattenburg, and Norton. An identified center is simply one indicated by the State Planning Commission as having potential to be designated in the future. (*SDRP*)

The 2001 *New Jersey State Development and Redevelopment Plan* identified three existing centers in Union Township Jutland, Pattenburg, and Norton as Hamlets. Hamlets are the smallest places eligible for Center designation in the State Plan. They are primarily found in rural places often at crossroads usually without utility connections. Hamlets are classified as having population between 25 and 250 and up to 100 dwelling units, a minimum gross housing density of 2 dwelling units per acre, and are generally 10 to 50 acres in size. Each of Union Township's Hamlets fit these criteria.





Source: New Jersey Department of Community Affairs, Office of Smart Growth. New Jersey State Development and Redevelopment Plan. Preliminary Plan Maps. January 26, 2007



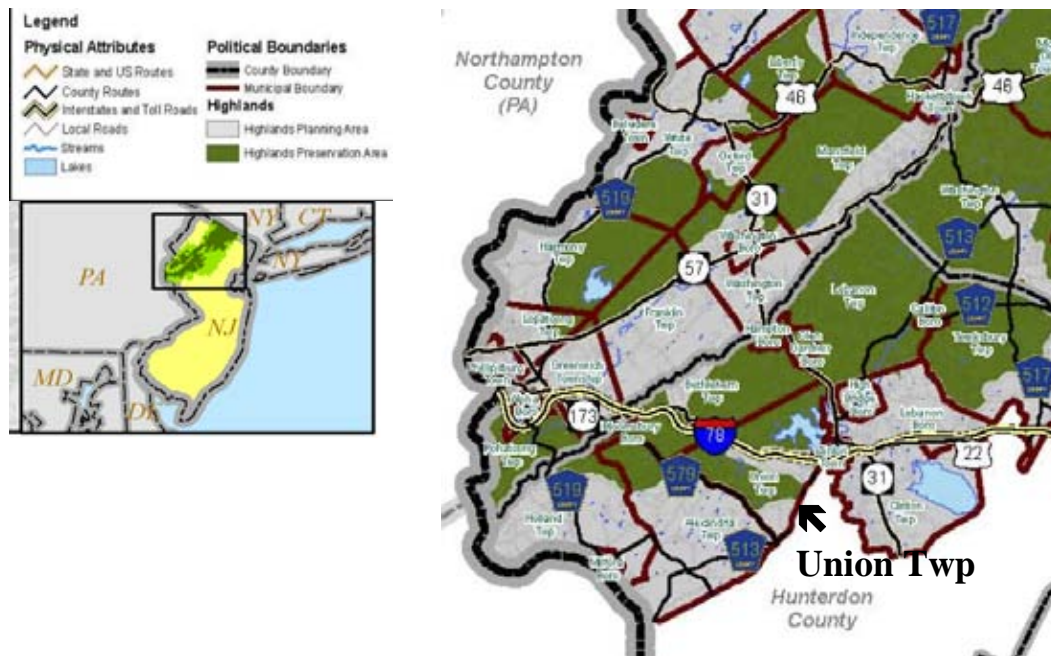
Highlands Regional Master Plan

The New Jersey State Legislature enacted the Highlands Water Protection and Planning Act (HWPPA) on August 10, 2004. In an effort to ensure the integrity of northern New Jersey's drinking water resources, the HWPPA imposes strict land use controls over large parts of the 88-municipality region, known as the Highlands Preservation Area. Lands within the Preservation Area are subject to heightened restrictions on development, water use and activities that affect water quality, or environmentally sensitive lands. The HWPPA expands mandatory buffers around the region's streams and water bodies, sets limits on impervious coverage for individual properties and requires Highlands Regional Master Plan (RMP) conformance from Preservation Area municipalities, among other criteria. Lands in the Highlands Planning Area are not subject to the strict land use controls of the Preservation Area. However, municipalities can opt in to the stricter standards if they choose to, and are offered planning grants by the N.J. Highlands Council to help align Municipal Master Plans with the RMP. The Council passed the final RMP in July 2008, which was then ratified via a September 5, 2008 Executive

Order by New Jersey Governor Jon S. Corzine. The RMP is now fully in effect, and is the planning document for the Preservation Area, and also for Planning Areas where towns opt into the RMP.

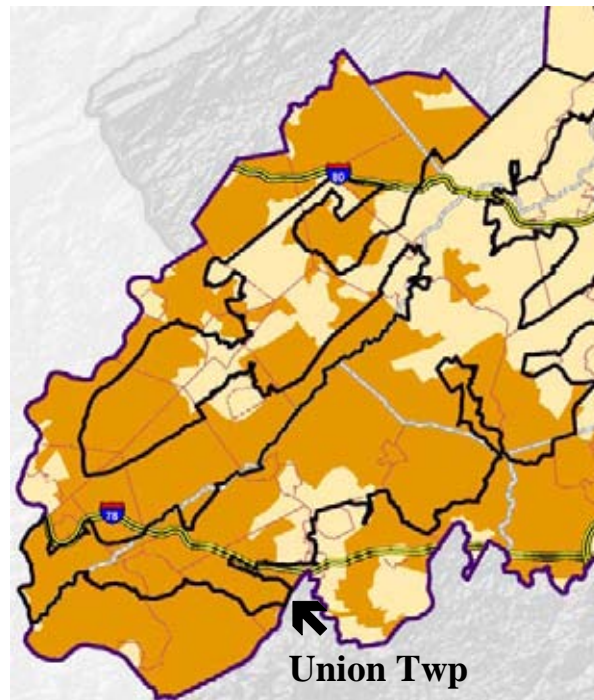
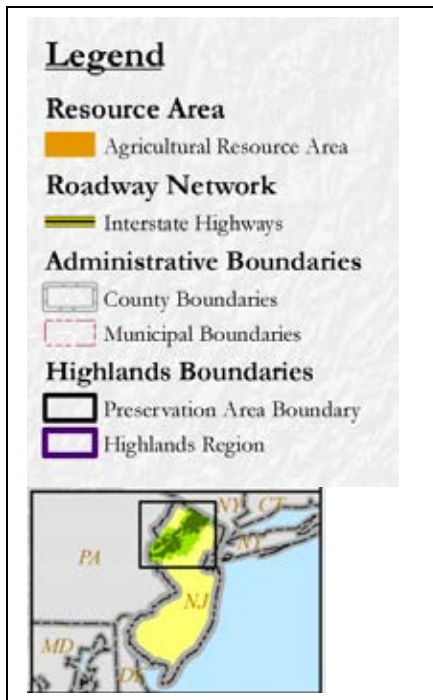
As defined by the HWPPA, all of Union Township is located within the Highlands region. Union Township contains land in both the Planning Area and the Preservation Area, with the majority falling into the Preservation Area. Except for portions of the Township south of Cooks Cross Road and along the I-78 corridor, all other land is in the Highlands Preservation Area (see *Highlands* map below and *Farmland* map within this Plan's Map Section). The Highlands encompasses 3,139 acres of the Township's total farmland (80%), with nearly 60% of the total farmland falling into the Preservation Area. (see New Jersey *Highlands Planning and Preservation Boundaries* map below). The remainder of the Township, in its southwestern portion near Pittstown, falls within the Planning Area. (2008 *Highlands Regional Master Plan*)⁵

The New Jersey Highlands Council – the regional planning body charged with implementing the Highlands Act – has established the preservation of farmland and the industry of farming as one of its principal objectives. To this end, the *Highlands Final Regional Master Plan* identifies an Agricultural Resource Area that will receive much of the future funding and institutional support from the Highlands Council. The Agricultural Resource Area encompasses areas that contain contiguous farmbelts and quality agricultural soils. Virtually all of Union Township falls within the Agricultural Resource Area (see *Agricultural Resource Area* map below).

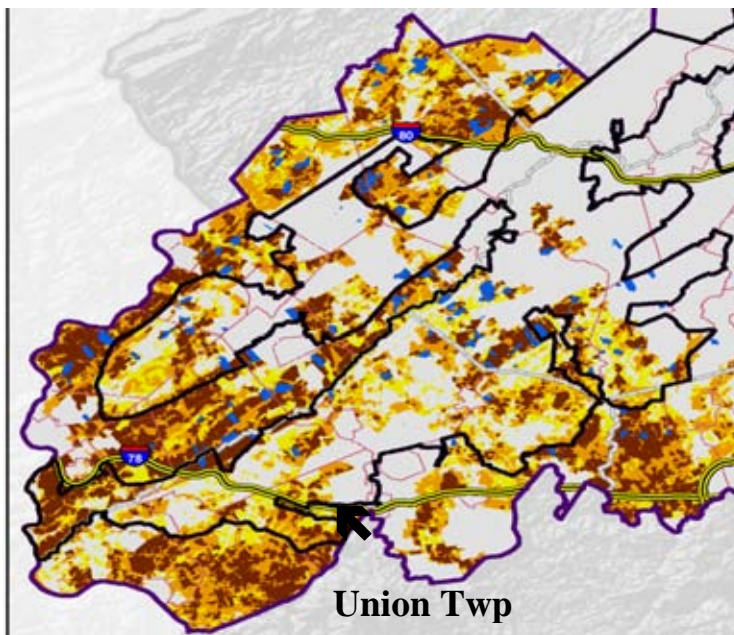


Source: N.J. Highlands Council Regional Master Plan

The Highlands Council also identifies Agricultural Priority Areas – subsets of the larger Agricultural Resource Area that are particularly well-suited to agricultural production. Criteria used by the Highlands Council to delineate these areas include soil quality, tillable acreage, buffers, development potential, local commitment, contiguity with other farm parcels and size. (*Highlands Sustainable Agriculture Technical Report*)⁶ Union Township contains land in High, Moderate, and Low Priority Agricultural Areas. Lands designated as High Priority Agricultural Areas are scattered throughout Union Township, but are mainly concentrated in the southeast and southwest corners of the Township. (see *Agricultural Priority Areas* map below).



Source: N.J. Highlands Council Regional Master Plan



Source: N.J. Highlands Council Regional Master Plan

Hunterdon County Growth Management Plan

The *Hunterdon County Growth Management Plan* fulfills the requirement set forth by the New Jersey County Planning Act (N.J.S.A. 40:27-1 et seq.), that counties must adopt a plan that governs their physical development. The *Growth Management Plan* was adopted in December 2007. The *Growth Management Plan* is an effort to enhance intergovernmental coordination by serving as an intermediary between State and local governments. As such, it is a vital link in the planning process that connects policy with action. It incorporates State-level land use policies, as outlined in the State Plan, into plans for local, on-the-ground initiatives such as center designations and resource conservation efforts. The Vision Statement of the *Growth Management Plan* emphasizes the County's desire to preserve its rural character. (*Hunterdon County Growth Management Plan*)⁷

The *Growth Management Plan* was developed with input from the Hunterdon County Planning Board, five different advisory committees (steering, land use, build out, community, and natural resources), and meetings held throughout the development of the plan. This resulted in a series of general policy goals and indicators that measure the progress being made towards these goals. The number one goal identified in the *Growth Management Plan* is the promotion of environmental sustainability. Additional goals identified by the *Growth Management Plan* include promoting efficient development patterns, planning an effective transportation system that accommodates but does not encourage increased traffic, maintaining a healthy economy, encouraging diverse housing opportunities, supporting community based planning, and planning with the County's residents in mind. (*Hunterdon County Growth Management Plan*)

The *Hunterdon County Growth Management Plan* supports protection of the County's land and natural resources by directing development away from areas targeted for preservation. The Plan calls for development to be guided by environmental design, "protecting remaining rural areas and conveying a rural ambience in more developed locations". Public opinion and community design surveys that were conducted as part of the *Growth Management Plan* identify the scenario of smaller residential lots surrounded by preserved farmland as the preferred zoning scheme compared with evenly sized large lots with no designated preserved land. (*Hunterdon County Growth Management Plan*) Many of the recommendations in the *Growth Management Plan* focus on promoting development in existing centers and along the I-78 highway corridor.

Municipal Planning

Union Township has developed a comprehensive *Master Plan*, dated 1984 and amended August 1999, which emphasizes farmland and open space preservation as principal objectives. The *Master Plan* discusses the following relative to farmland preservation:

1. The Township should continue to uphold its Right to Farm Act, "preventing nuisance ordinances that are counter productive to farming" (p. B1-4) and providing incentives for farmers whenever possible;

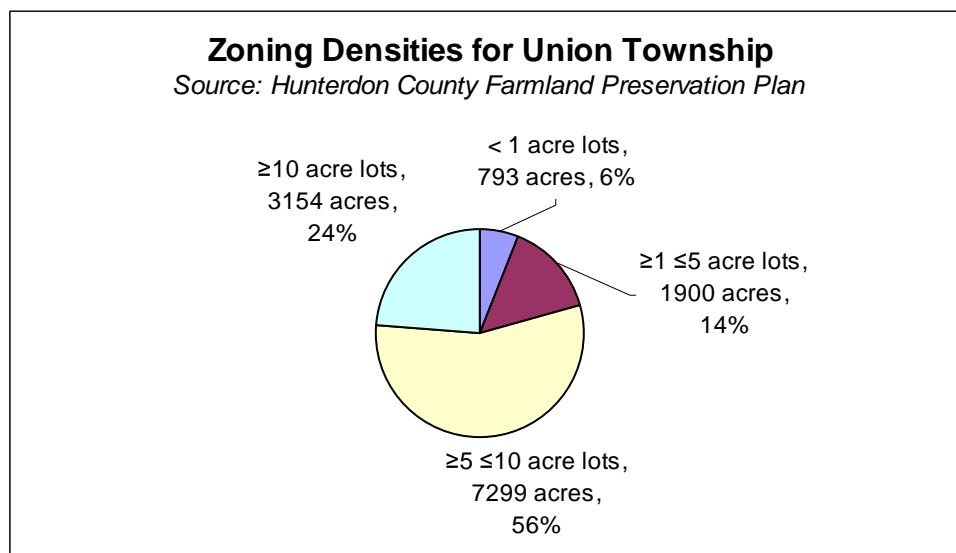
2. The Township supports “innovative agricultural use standards so that a farmer has the maximum opportunity to be economically viable” (p. B1-4) by permitting alternative economic opportunities for farmers in return for deed restricting their land;
3. The Township has adopted cluster zoning- “a redistribution of an entire parcel’s development potential to a portion of the same parcel capable of supporting higher densities” (p. B1-4) - in order to preserve large tracts of farmland. The Township has found this ordinance to be successful and would like to see it maintained;
4. Allow for the continuation of purchase of development rights for farmland preservation; and,
5. The creation of a Farmer’s Market at a site along I-78 would help further the economic development of the farming community. (*Union Township Master Plan*)

The *Land Use Element* of the *Union Township Master Plan* states that preservation of farmland is an important goal and encourages practices that strongly support Union Township as an agricultural community. It includes the following strategies:

- Assisting the agricultural community through positive municipal policies;
- Discouraging development pressures in prime agricultural areas; and,
- Encouraging innovative measure to preserve farmland and rural landscape features.

Municipal Zoning

The majority of Union Township (7,299 acres, or 56%) is zoned for development densities of between 5 and 10 acres per unit. Large lot sizes (greater than 10 acres per unit) also compose a large portion of the Township at 3,154 acres (24%). Only one fifth of the Township has less than 5 acre zoning, with lots less than one acre making up 793 acres (6%) of Union Township (see *Zoning Densities* map below).



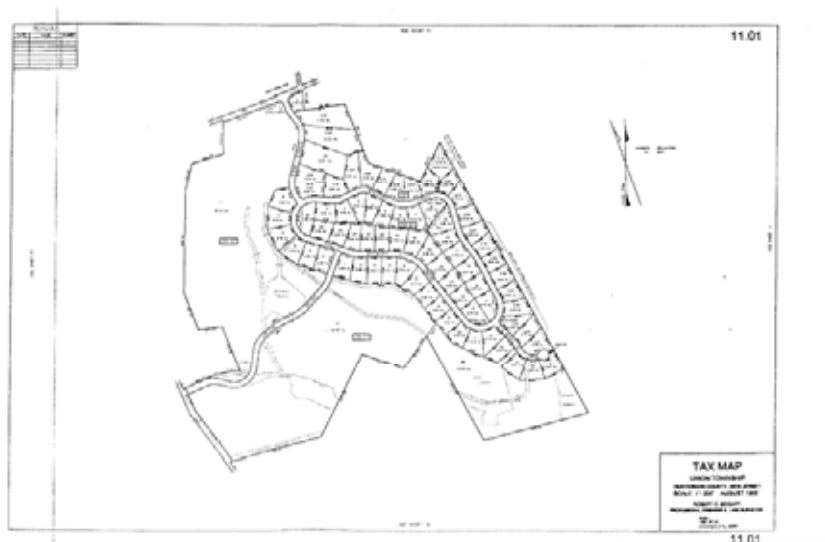
In the *Master Plan*, the Township indicated that preservation of farmland is an important goal. The Township hopes to do more than preserve farmland; its goal is to continue farming as a viable economic activity. The Plan calls for farming to be viewed as a “high level, profit-oriented business activity with rights of its own.” (p. B1-4) (*Union Township Master Plan*)

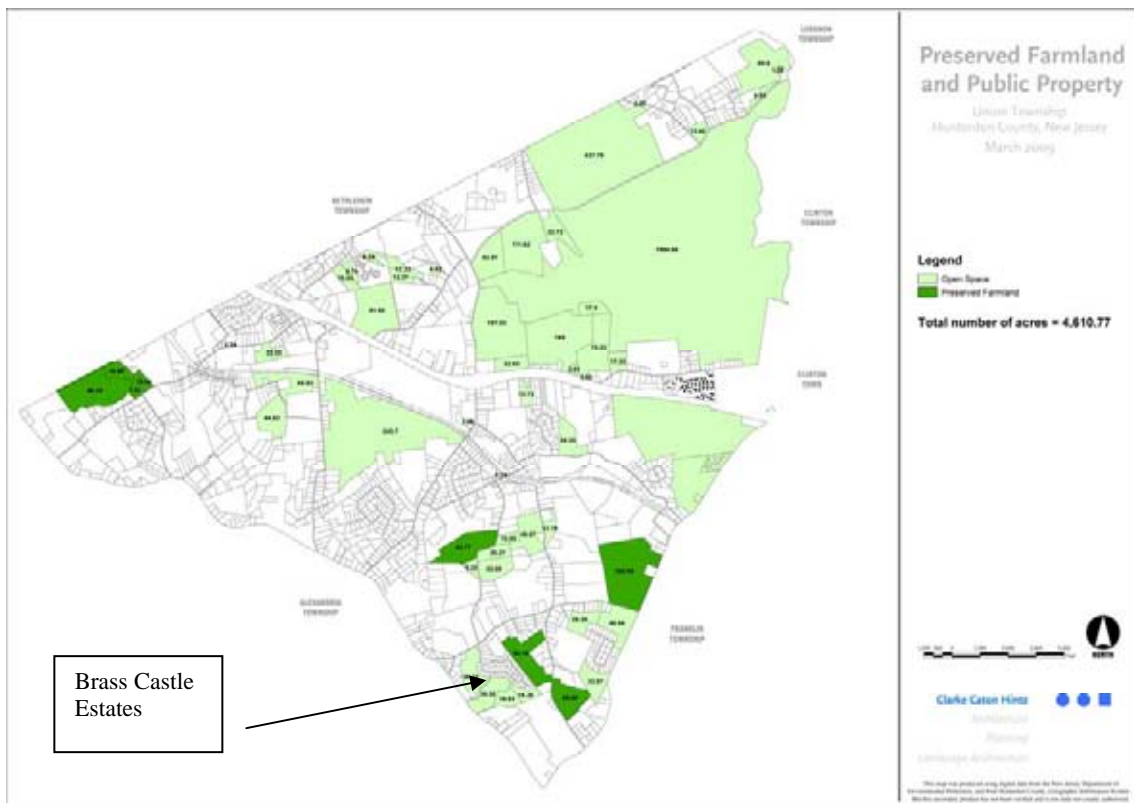
Buffers provided by the existing zoning are currently adequate for farmers. The Agricultural Advisory Committee notes there have been no complaints from homeowners or from farmers regarding neighboring land uses.

In addition to strategically locating development of high and low density, there are a number of other planning techniques that the Township could actively explore to further its farmland preservation goals. These include:

Cluster zoning allows development to occur on a smaller percentage of a site while retaining the net development density permitted by local zoning. Clustering has been applied in Union Township by concentrating development on a portion of the site while maintaining the viability of farmland by leaving areas open for agricultural production. The cluster zoning provision outlined in the *Master Plan* allows 80% of a site to be preserved in its natural or agricultural state while permitting the remaining 20% of the site to be developed at a higher zoning density. The Wellington West Subdivision and Brass Castle Estates are two developments in Union Township that implement cluster zoning.

The Wellington West and Brass Castle Estates were approved and constructed as conditional uses in the AP2 zoning district. Union Township permits single family detached cluster developments as a conditional use in the Agricultural Preservation Zones and the Watershed and Conservation Management Zones. The condition of approval includes a stringent aquifer test to determine if clustered housing on septic systems and wells can be supported in these sensitive environmental areas. Clustering is a permitted use in the other residential zones. A map of the Brass Castle clustered development is included below. Three farms are associated with this development. The farmland map on the following page indicates the preserved land which resulted from this clustering tool.





While clustering such as Brass Castle is an example of how to provide transition between agricultural areas and residential areas, it is limited in effectiveness if the small farms are not connected to the network of larger agricultural areas.

There are two zoning districts which are specifically intended to protect prime and statewide important agricultural soils: the Agricultural Preservation 1, AP1, and Agricultural Preservation 2, AP2, zones. These districts are designed to provide for maximum opportunity for open space and require 80% of the development to be deed restricted. The base zoning is one dwelling unit for four acres in AP1 Zone and one dwelling unit per 8.3 acres in the AP2 Zone. Minimum gross site for clustering in the AP1 Zone is 15 acres and 27 acres in the AP2 Zone.

The zones are served by private utilities and a minimum lot area of 1.5 acres is required; however, the net buildable portion of the 1.5 acre lot is 30,000 square feet, the remainder 2.5 acres shall be permanently deed restricted from non-agricultural uses.

In addition, performance standards require single family clustered developments in the AP1 and AP2 Zones to be located and designed to minimize intrusion on the agricultural uses within the lot and the district. The cluster shall be kept in tight configuration to minimize the edges of the development that abut the agricultural uses.

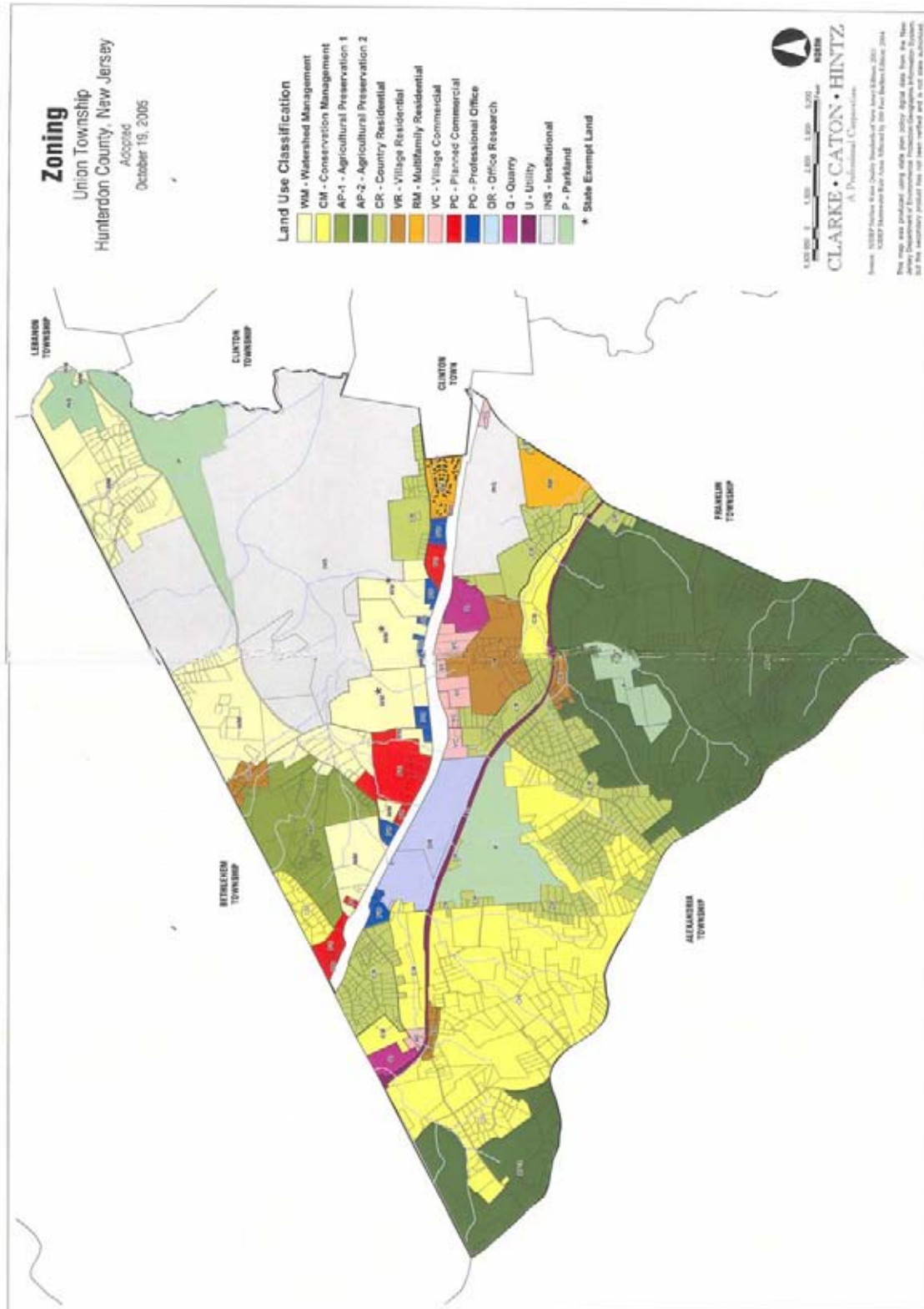
Union Township has petitioned the New Jersey Highlands Council for Plan Conformance. As such, the entire Township's zoning regulations and standards are subject to revision to conform to the *Highlands Regional Master Plan*. The vast majority of Union Township falls within the Preservation Area of the Highlands and is required to comply with the strict land use controls promulgated by the NJDEP for these areas.

Lot size averaging is another planning tool that maintains the net allowable zoning density on a site, but does not enforce uniform lot size requirements or setbacks. This allows for some development lots to be very small in order to accommodate affordable housing units, neighborhood commercial stores, or "village" development densities, while other lots can be very large in order to encompass active farms or natural areas.

Non-contiguous cluster zoning is an additional planning tool that the municipality may want to use to protect agricultural and environmentally significant areas. In contrast to regular cluster zoning, permits the transfer of development density *between* parcels instead of only within parcels. First, a "sending" parcel (where the permitted development density is reduced) and a "receiving" parcel (where the permitted development density is increased) are designated. Then, the total development potential on both properties is calculated. In a case where two fifty-acre parcels are undergoing non-contiguous clustering under ten-acre zoning, there are five permitted units on each lot and ten permitted units overall. Finally, the overall development potential (10 units in this case) is applied to the receiving parcel while the sending parcel is permanently protected from future development. Non-contiguous clustering allows for development to be moved out of prime agricultural areas and concentrated into more appropriate and desirable locations.

The above tools are voluntary options that a town may use when determining maximum lot sizes and mandatory set asides for resource protection. If the Township turns to mandatory cluster provisions or a mandatory transfer of development rights (TDR) program, the Agricultural Advisory Committee will work the Planning Board to ensure agricultural resources and land are set aside in a manner to ensure viability of the farm in the future.

Union Township's zoning map is included on the following page.



Transfer of Development Rights

Transfer of Development Rights (TDR) is a growth management tool that allocates development rights from one location (the preservation or “sending” area), to another (the development or “receiving” area). These development rights are purchased by developers, and allow them to build at higher densities within the receiving zone than what existing zoning permits. Viewed as an equity protection mechanism, transfer-of-development rights provides for the preservation of important agricultural lands while fully compensating landowners and minimizing public expenditures. To date, this program has not been utilized by Union Township to preserve farmland.

The New Jersey State Transfer of Development Rights Act (*N.J.S.A. 40:55D-140*)⁸ authorizes the transfer of development rights by municipalities and outlines what a town must do in order to adopt or amend a TDR ordinance. First, the municipality must prepare a Real Estate Market Analysis (REMA) that quantifies the development potential of the sending zone(s) and the capacity of the receiving zone(s) to accommodate additional development. It must then amend its master plan to include a Development Transfer Plan Element that outlines a mechanism for assigning development credits to areas in the sending zone and reapplying them to areas in the receiving zone. An updated Utility Service Plan and Capital Improvement Program for the receiving zone should be adopted as well. Finally, a town must receive approval from the State Planning Commission to adopt the TDR ordinance. (*N.J.S.A. 40:55D-140*)

There are several different transfer-of-development rights programs that may be instituted in Union Township. One such program is the *intra-municipal* TDR in which sending and receiving areas are located within the same town. *Inter-municipal* TDR programs establish sending areas in one municipality and receiving areas in another. Some form of tax-based revenue sharing may be necessary with inter-municipal TDR programs.

Union Township also has the opportunity to participate in a *regional* TDR program. With passage of its final Regional Master Plan in July 2008, and the September 5, 2008 ratification by Governor Jon S. Corzine, the New Jersey Highlands Council has established a regional TDR program that will be open to all municipalities within the seven county Highlands Region. It is expected that the Council will establish a TDR Bank in late 2008, and that funds will be available to start the program. Once the Bank is established, the Highlands regional TDR program will be effectuated. (*Eileen Swan*)⁹ Through the Highlands program, landowners in the Highlands Preservation Area may sell the development rights on their lands to developers, who will then exercise them in voluntarily designated receiving areas throughout the seven-county region. Municipalities containing these receiving areas will have the right to assess impact fees of up to \$15,000 per unit for all new development. They will also be able to apply for grants to offset the costs associated with amending their master plans and municipal ordinances. Nearly 80% of Union Township falls within the Highlands Preservation Area and is eligible for designation as a TDR sending area through this program. TDR will be considered in Union Township on a case by case basis and when another community that is willing to accept the transferred credit is identified.

In the future, the New Jersey TDR Bank may facilitate TDR activities statewide. It plans to offer Planning Assistance Grants and technical assistance to municipalities looking to establish municipal TDR programs. They may also provide funds for the purchase of development credits. The State TDR Bank will also provide financial banking on loans secured using development credits as collateral, and keep records of all development credit transfers within the State. The New Jersey Office of Smart Growth (OSG) also offers Smart Future Planning Grants and technical assistance to municipalities in order to help them plan for and implement TDR programs. Union Township may benefit from participating in a TDR program, primarily as a Township with sending areas.

¹ United States Census Bureau. 2000 Census data- Union Township, Hunterdon County, New Jersey. <http://www.census.gov>.

² Personal communication with Gary Torres, New Jersey Department of Environmental Protection, Bureau of Pretreatment and Residuals. November 12, 2008.

³ Comprehensive Master Plan and Background Analysis Report for Union Township, Hunterdon County, NJ. 1984, amended 1999.

⁴ New Jersey State Development and Redevelopment Plan. March 2001.

⁵ New Jersey Highlands Council. Highlands Regional Master Plan. July 2008.

⁶ Highlands Sustainable Agriculture Technical Report. January 2007.

⁷ Hunterdon County, New Jersey. 2007 Hunterdon County Growth Management Plan. December 2007. <http://www.co.hunterdon.nj.us/planning/smartgrowth.htm>

⁸ New Jersey Statutes Annotated 40:55D: Municipal Land Use Law.

⁹ Personal communication with Eileen Swan, Executive Director, New Jersey Highlands Council. September 1, 2008.

CHAPTER 4: FARMLAND PRESERVATION PROGRAM – OVERVIEW



Farmland is an irreplaceable natural resource that contributes to the economic and ecological value of a community. Farmers have been land stewards throughout most of history with agricultural lands contributing food and fiber, clean air, storm water management, groundwater recharge, wildlife habitat, and valued open vistas. In addition to providing employment, agriculture contributes to the local economy through the sale of produce and the purchase of equipment and other materials. Productive farmland is extremely beneficial to a municipality in that it helps keep municipal taxes down, increases property values, adds to the community's character, and creates a sense of open space.

There are 2,996 acres of active agricultural land in Union Township. (*New Jersey Farmland Assessment 2006*)¹ Although only about 25% of the land in the Township is currently used for agriculture, the majority of its soils are classified as either prime farmland or farmland soils of statewide importance, making them ideal for farming. (*Farmland Soil Classification for 1995 Agricultural Land*)² Because of this, the Township's *Master Plan* lists the preservation of agricultural lands as a priority.

There are fifteen preserved farms in Union Township, protecting a total of 790 acres of land. Two of these farms, the Delaney Farm and the Ravenburg Farm are shared between Union and Bethlehem Townships. In 1996, Bowers Farm became the first in the Township to enter the farmland preservation program through a County Easement Purchase, protecting 102 acres of agricultural land. (*New Jersey Farmland Preservation Program Listing of Preserved Farmland*)³

Hunterdon County Agricultural Development Areas (ADAs)

The Hunterdon County Agricultural Development Area (ADA) was adopted by the Hunterdon County Agriculture Development Board in 1983 in order for the County to be eligible for the state farmland preservation program. (*Hunterdon County Comprehensive Farmland Preservation Plan*)⁴ The ADA designates land that has the potential for long term agricultural viability. Within the ADA, agriculture would be the preferred, but not the exclusive, use. The Hunterdon County ADA is shown as an inset map on the *Union Township Project Areas Map* included within the *Maps Section*.

Statutory Criteria:

- The land must be agriculturally productive or have future production potential. Also, zoning for the land must permit agriculture, or permit it as a nonconforming use.
- Suburban and/or commercial development must be reasonably non-existent in the proposed ADA area.
- The land must comprise no greater than 90% of the agricultural land mass of the County.
- Any attributes deemed appropriate by the Board must also be incorporated.

County Criteria:

- The ADA must encompass an area of at least 250 contiguous acres.
- Prime soils and/or soils of statewide importance must constitute the majority of the land.
- The land should contain only minimal non-farm development.
- Public sewers should not be present in the area.
- The landowner must give consent to be included in the ADA. (*Hunterdon County Comprehensive Farmland Preservation Plan*)

Overall, there are 3,896 acres of farmland assessed property in Union Township. Of this, 1,992 acres are included in the Hunterdon County ADA. The ADA established by Hunterdon County encompasses the southern portion of Union Township, concentrated in the southeast and southwest corners of the Township. The ADA does not include the northern part of the Township because the majority of this land is occupied by the Spruce Run Reservoir and preserved open space. Union Township would like the County to consider amending the ADA to include additional land near Hoffman Park and farmland west of the Clinton Wildlife Management Area that is currently tilled and farmed. As landowners express interest in preserving their farms in these areas, the Township and County will consider amending the ADA to include these lands.

As noted in *Chapter 5*, Union Township has identified the Hampton-Spruce Run Project Area as an area of importance for farmland preservation in the Township. The Township will identify targeted farms within this project area only upon interest by the landowners and subsequent approval by the SADC and CADB of expansion of the County ADA to include this project area. The PIG statute requires that all targeted farms be located within the County ADA.

The Union Township *Master Plan* supports the County's ADA, and the preservation program and initiatives that are available to its farm owners:

“It has been the policy of the Township to allow for innovative agricultural use standards so that a farmer has the maximum opportunity to be economically viable. In return or deed restricting their land from future development, farmers should be permitted a variety of alternate economic opportunities for their land,

such as accessory entertainment, farm wineries, roadside stands, bed and breakfasts, or other related businesses. This policy to provide flexible alternatives for farmers to find creative ways to find economic viability should be retained.” (p. B1-4) (Union Township Master Plan)⁵

Farmland Preserved to Date by Program

In 1983, the New Jersey State Legislature adopted the State Agriculture Retention and Development Act, and created the State Agriculture Development Committee (SADC), which provides funding for farmland preservation programs, establishes farmland preservation policy statewide, and oversees program administration.

As of August 2008, there are fifteen preserved farms in Union Township, protecting **790 acres**. Six of these projects were done through State and County Programs, while nine were preserved at the municipal level. There are no additional farms pending farmland preservation at this time.

To date, **\$3,216,033** has been spent to preserve farms in Union Township. Of this, Hunterdon County has contributed \$213,625 to preserve farmland and the state has spent \$2,431,720, covering 76% of the cost of the land. Union Township has spent \$566,712 or 18% of the total cost to preserve farmland in the Township. Costs associated with farmland preservation at the municipal level are more difficult to account for, as many of these properties were deed restricted through the Planning Board and Township Committee.

Preserved Farms in Union Township

Farm	Program	Acres	Total Cost	State Cost	County Cost	Municipal Cost	Cost Per Acre	Year Purchased
Bowers, J.&D.	County Easement Purchase	102	\$ 408,684.00	\$ 286,078.80	\$ 61,302.60	\$ 61,302.60	\$ 4,000.00	1996
Delaney, J.&M.	County Easement Purchase	114	\$ 170,385.00	\$ 130,628.50	\$ 19,878.25	\$ 15,902.60	\$ 1,490.36	1997
Strasser, Rolland A. and Sally	Municipal Deed Restricted Farm**	22	\$ -	\$ -	\$ -	\$ -	\$ -	1998
Rossi, Patricia S.	Municipal Deed Restricted Farm**	29	\$ -	\$ -	\$ -	\$ -	\$ -	1998
Manziona, Anita	Municipal Easement Purchase	42	\$ 240,840.39	\$ -	\$ -	\$ 240,840.39	\$ 5,696.32	2001
Geiler, Dorothy M.	County Easement Purchase	62	\$ 405,555.70	\$ 324,444.83	\$ 32,444.46	\$ 48,666.41	\$ 6,589.12	2002
Ravenburg, R.&T., and Kenneth*	SADC Direct Easement Purchase	38	\$ 243,847.50	\$ 243,847.50	\$ -	\$ -	\$ 6,500.00	2002
Aldrich, John F.	Municipal Deed Restricted Farm**	46	\$ -	\$ -	\$ -	\$ -	\$ -	2003

County Planning Incentive Grants

The goal of County Planning Incentive Grants (PIGs) is to protect and preserve large pieces of contiguous farmland through the purchase of development easements. The SADC has recently updated their rules (N.J.A.C. 2:76-6.3 through 2:76-17A.17) to promote County PIGs to streamline and expand the farmland preservation program throughout the state. Applications are now accepted year round. In order to qualify for PIGs, an agricultural advisory committee, for which the CADB functions for the county, is necessary. Additionally, the County must maintain a dedicated source of funding or alternative means for funding farmland preservation. Both county and municipal applications should correlate with county comprehensive farmland preservation plans. Hunterdon County completed their *Comprehensive Farmland Preservation Plan* in order to bring it in to compliance with the newly adopted guidelines and qualify for the County Planning Incentive Grant program.

At the moment, there are no farms in Union Township that have applied for preservation through County Planning Incentive Grants. However, the Roerig Farm has been targeted by the County for preservation through the PIG. Preservation of this property would protect 67 acres of land. (*Bill Millette*)⁶

Municipal Planning Incentive Grants

Municipal Planning Incentive Grants (PIGs) are very similar to the County PIGs in their goals, requirements, and implementation. Like the County PIGs, Municipal PIGs require a local financial commitment for preserving farmland. Upon the completion of a municipal Farmland Preservation Plan and application to the SADC, grants are provided by the SADC in order to purchase development easements. In order to qualify for this program, the town must have an Agricultural Advisory Committee and a source of funding for farmland preservation.

Farms to be preserved through the municipal PIG program need to be approved by the CADB, but only in the case where the CADB is contributing funds towards the farm. The CADB has the opportunity to comment on the application, but if the town is purchasing the property through the PIG program without the County's funds there is no requirement for the County's approval. The County can hold the farmland preservation easement if county funding is involved and the SADC can hold the easement if County funding is not included in the project.

With the completion of this *Farmland Preservation Plan*, the Township will be enrolled in the Planning Incentive Grant program with the SADC.

There are a variety of programs available in which a farmer may preserve their farm. The following sections identify other program options available to support farmland preservation in Union Township. Information is provided on how these programs have been used within the Township.

Municipal Farmland Preservation Program

Union Township purchased the development rights to the Manzione Farm in 2001, restricting it for agricultural use only and protecting 42 acres. (*Deed of Easement*)⁷

Union Township has been extremely proactive in protecting its agricultural land base. The Township's Planning Board has established Farmland Conservation Areas to deed restrict properties to aid in the preservation of agricultural lands. (These properties are referred to in *Chapter 5* as "other preserved farms" and discussed in-depth in *Chapter 3*). Through this designation, these lots are protected from further subdivision. There are nine farms in Union Township that have been preserved at the municipal level through innovative zoning and subdivision.

Union Township has been extremely proactive in protecting its agricultural land base. In addition to pursuing large farmland acquisitions, the Planning Board and Township Committee have creatively negotiated with developers and landowners to deed restrict agricultural lands using both conventional acquisition and negotiation during the variance process resulting in deed restrictions against further subdivision and non-agricultural uses. The intent of both the clustering ordinance and deed restricting parcels through the variance process is to create small but viable farms in close proximity to other agricultural parcels. The overall purpose is to protect as much of the Agricultural Preservation district in a reasonable contiguous fashion. While acknowledging that small farms created by clustered development do not on their own preserve the industry of agriculture, they do provide transitional land uses between residences and larger agricultural operations. Many of these small farms are equine operations which rely on the other farming operations for hay and grain supplies. Clustering tools are one of many techniques which when used carefully as part of an overall program for protecting agriculture can be effective.

The Wellington West Subdivision, located in the Pittstown area, contains three farm lots as designated by the developer and the Planning Board. These properties are part of the cluster zoning that allows for the creation of substandard lot sizes in exchange for the preservation of large farm lots. These lots are restricted to single-family residential uses and agricultural uses and active farming of this land is encouraged. As part of the Township's Agricultural Preservation District, these lots fall under Right to Farm protection and add 109 acres of preserved farmland. (*Declaration of Covenants and Restrictions*)⁸

Five other farms including Kutchman, Greaves, Andino (2), and Strasser are also deed restricted against further development. The Greaves farm is best categorized as a farmette, and follows similar restrictions to those described above for the Wellington West Subdivision. The Kutchman, Andino, and Strasser properties are Farmland Conservation Areas. These properties all contain conservation easements, as determined by the Township Planning Board. This distinction is slightly different in that the deeds prevent them from further subdivision and promote farming. These deed restrictions help

protect an additional 111 acres of farmland. (*Restriction and Conservation Easement*)⁹
(*Planning Board Resolutions*)¹⁰

In addition, the Township purchased and preserved the Douglass property in 2000 for the purposes of farmland preservation. This 98-acre property has been owned and leased by the Township for farming since that time. It is currently being auctioned as a restricted farm and the proceeds of which will be used by the Township to reimburse their Open Space Trust Fund to fund future farmland projects. It is anticipated that the property will generate over \$1 million for the Trust Fund.

SADC Direct Easement Purchase

Also important to Union Township farmers is the State Agriculture Development Committee (SADC). The SADC is the lead program in administering the State's Farmland Preservation Program. The SADC:

- Provides cost share funding for the purchase of development easements.
- Directly purchases farms and development easements from landowners;
- Administers grants to landowners in the Farmland Preservation Program to fund up to 50 % of soil and water conservation projects;
- Administers the Right to Farm Program (discussed in *Chapter 8*);
- Administers the Transfer of Development Rights Bank; and,
- Operates the Farm Link Program, which helps connect farm owners with potential tenant farmers.

The SADC Direct Easement Purchase is a program that allows a landowner to apply directly to the SADC for the sale of development rights. In most cases, the State will pay up to 100% of the certified appraised easement value in the direct easement purchase program. The Direct Easement Purchase does not usually receive contributions from the County or the municipality, but in some situations can include local cost share. By participating in this program, the landowner retains ownership of their land, but agrees to restrict land use to agricultural purposes. The Direct Easement Program does not receive monetary contributions from the County.

There are currently two farms in Union Township that have been preserved through the SADC Direct Easement program, protecting a total of 120 acres of land. The two farms participating in this program are the Gyuro-Sultzer and Ravenburg Farms.

SADC Fee Simple

A fee simple acquisition involves an entire property being purchased directly by the state. The SADC pays the survey and title costs, the landowner is exempt from paying rollback taxes for farmland assessment, and the transaction can be completed in a matter of months. The SADC negotiates a purchase price subject to recommendations of two independent appraisers and review by a state review appraiser. The land becomes restricted so that it becomes permanently preserved for agriculture. In this type of

acquisition, the landowner does not retain any rights. The property is then resold at auction, and the SADC does not retain ownership. To participate in this program, the farmland must be within an ADA, and be eligible for Farmland Assessment. One farm in the Township, the Barrett Farm, has been preserved by SADC Fee Simple. This preserved farmland protects more than 149 acres at a total cost of \$1,090,720.

Non-profit

Grants are provided to nonprofit organizations by the State Agriculture Development Committee. These grants fund up to 50% of the fee simple or development easement values on farms. These grants help to preserve farmland throughout the county and generally the transactions involve properties with both agricultural and environmental significance. These grants are obtained through an application process, in which the land is valued by independent appraisers. The Hunterdon Land Trust Alliance and the New Jersey Conservation Foundation are active within the County and may be active in Union Township in the future. There are no farms currently preserved through nonprofit organizations in Union Township.

Transfer of Development Rights

The transfer of development rights is a growth management tool that transfers development rights from one location, a sending or preservation area, to another, an identified growth or receiving area. The development rights, purchased by a developer, are used to allow for development at a higher density than what the previous zoning of the receiving area allowed. At the moment, there are no farms in Union Township preserved through transfer of development rights.

Consistency with SADC Strategic Targeting Project

The purpose of the SADC Strategic Targeting Project is to prioritize farmland to be preserved by targeting farms for preservation based on specific criteria, including the prioritization of prime and statewide soils in agricultural production outside sewer service areas. According to the SADC, the Strategic Targeting Project has three primary goals. These are as follows:

- The coordination of farmland preservation and retention of agricultural practices “with proactive planning initiatives.”
- To update and create maps which serve as a tool for more accurate preservation targets.
- To coordinate different preservation efforts, such as open space, with farmland preservation.

Through the use of the Strategic Targeting Program, the SADC hopes to more efficiently target and designate farmland for preservation and, by doing so, strengthen the State’s agricultural industry. Through the completion of its *Comprehensive Farmland Preservation Plan*, Union Township meets each of the goals as outlined in the Strategic Targeting Project.

Union Township meets with the Hunterdon CADB monthly to further ensure coordination between the AAC and CADB. The County and Township discuss pending and proposed projects for preservation.

Eight Year Programs

The Eight-Year Farmland Preservation Program and the Municipally Approved 8-Year Farmland Preservation Program are both cost sharing programs for soil and water conservation projects, in which the farmer receives up to 50% of the costs for these projects, as well as protection against nuisance complaints, emergency fuel and water rationing, zoning changes and eminent domain actions. In return, the farmer signs an agreement that restricts the land to agricultural use for eight years. For entrance into these programs and to qualify for benefits, a farm must be located within the county ADA. Technical assistance for the soil and water practices comes through the Natural Resource Conservation Service and the Soil Conservation District. No farms in Union Township are enrolled in Eight Year Programs.

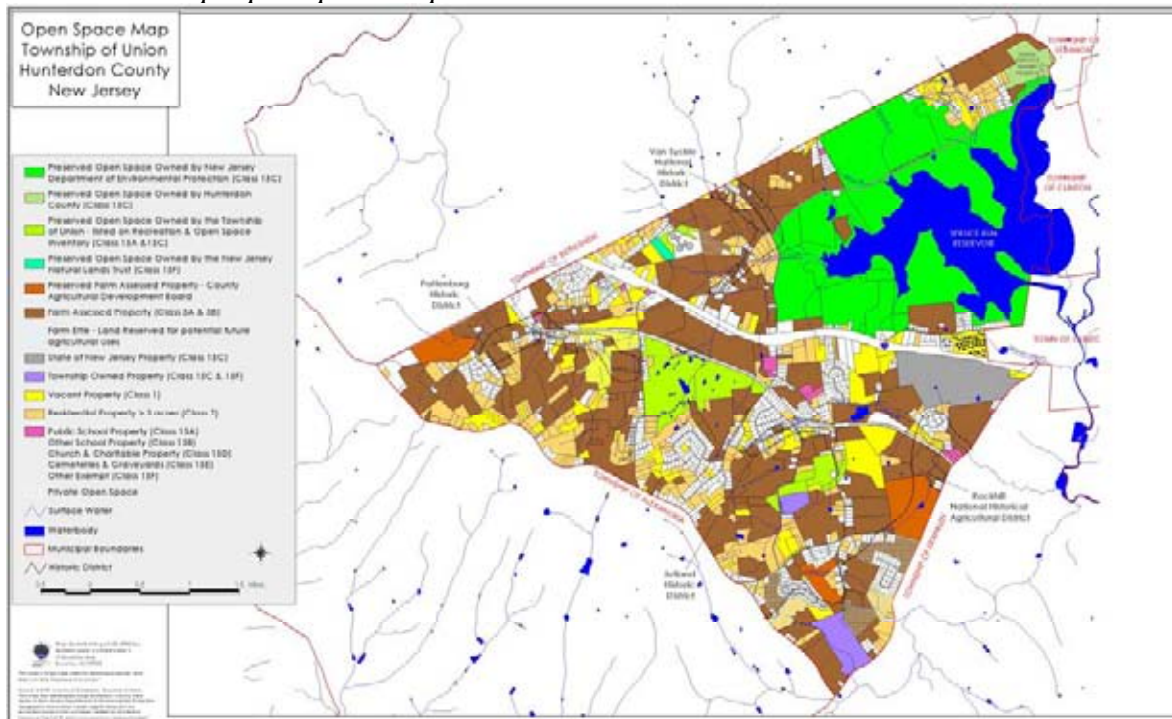
Coordination with Municipal and County Open Space Preservation Initiatives

A cooperative project involves a partnership and/or funding from more than one agency to leverage county farmland preservation dollars and make use of municipal open space trust funds or grants to non-profit organizations. These “hybrid” projects are an opportunity to use traditional open space funds, where appropriate, to help preserve farm properties, especially where those properties are a mixture of cropland and woodland areas. The use of Green Acres funding, local open space trust funds, and nonprofit grant funds are becoming increasingly important to preserving agricultural landscapes. All publicly preserved open space is shown in “green” on the *Farmland Map*.

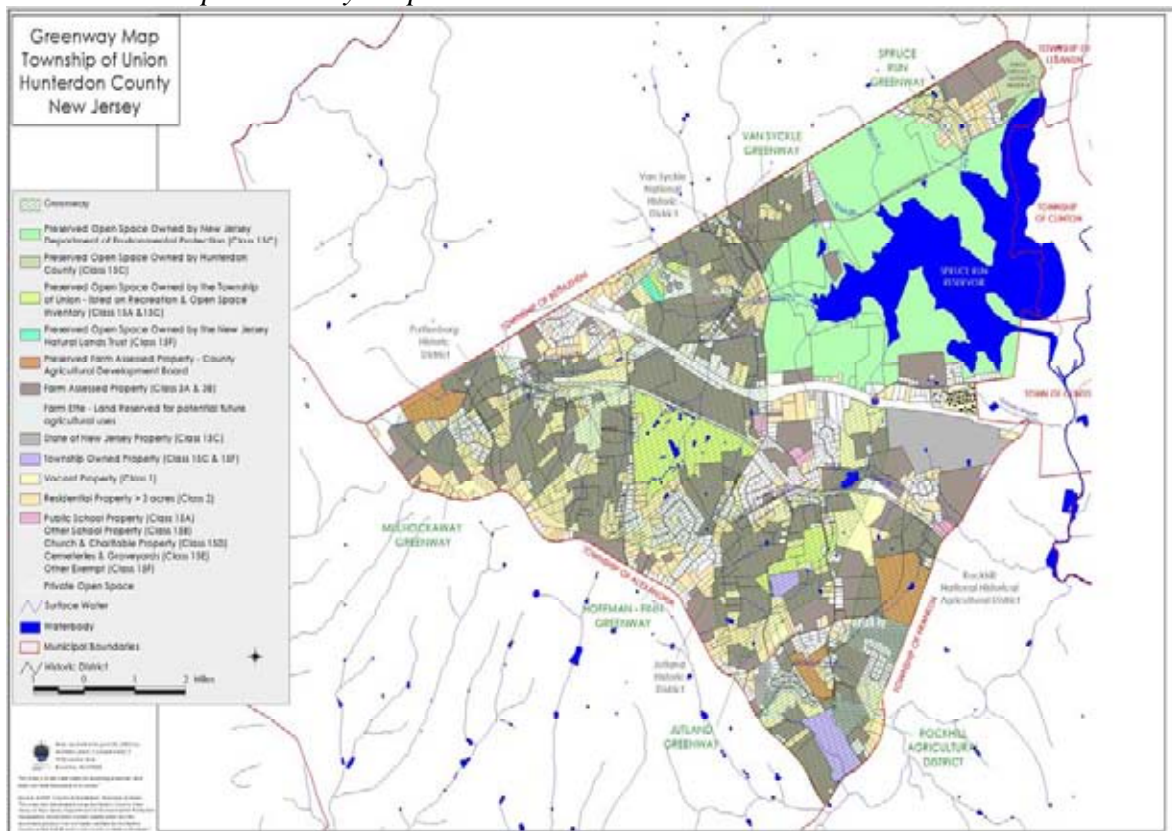
Farmland preservation and the identification of targeted farms should be coordinated with open space planning efforts. Trail easements and adjacency to proposed and existing active recreational facilities are potential areas of concern for farmers. In Union Township, the Environmental Commission is guided by this *Comprehensive Farmland Preservation Plan* as well as the Township’s *Open Space and Recreation Plan*.

The *Open Space and Greenway Maps* from the *Open Space and Recreation Plan* are included on the following page and identify priority areas for open space preservation and potential locations for trails. Also below is the *Garden State Greenways* map for Union Township. This map details the location of local and regional open space and recreational lands in and around Union Township. These maps may be used in conjunction with the Township’s *Project Areas Map* to identify and preserve land for open space and farmland protection.

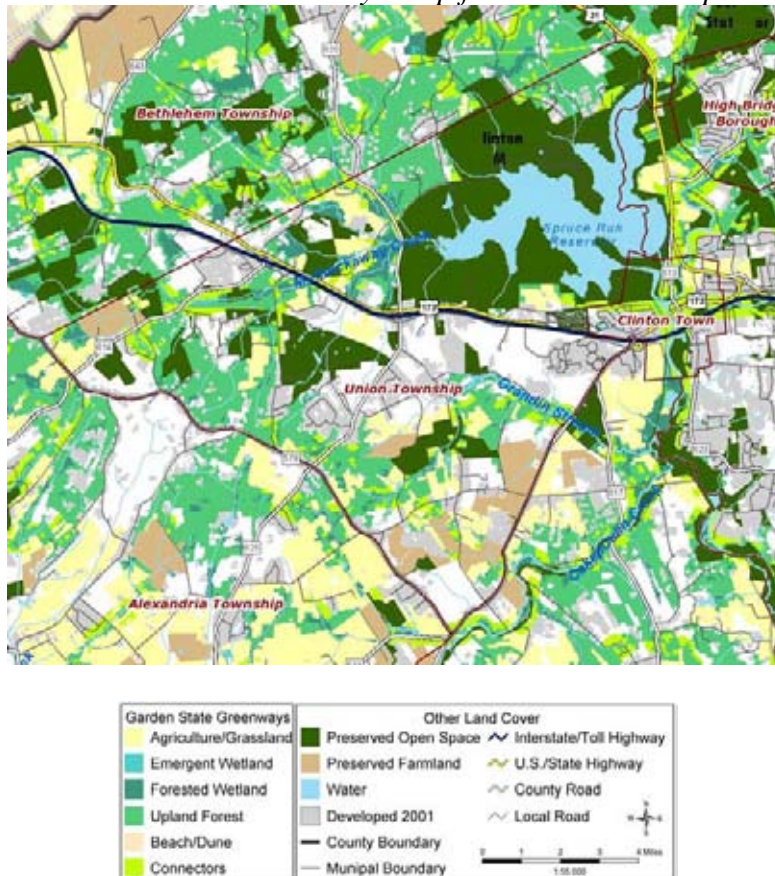
Union Township Open Space Map



Union Township Greenway Map



Garden State Greenways Map for Union Township.



Garden State Greenways: www.gardenstategreenways.org

To date, no open space funds have been used to take farmland out of production. Green Acres funding has been structured in such a way as to encourage continued agricultural production. Within Finn Road Park, land is leased to farmers and the Talca Property purchased by Green Acres is currently being farmed. The Douglass Farm has a trail onsite and is being auctioned as a farm. Additionally, regional equine trails are being encouraged by the Township.

The County holds monthly status meetings with municipal representatives to discuss mainly farmland preservation issues; however topics can include open space issues as well. These meetings are used to coordinate efforts when contemplating new projects as well as discuss pending projects that already are in the works. The County also maintains a Cooperative Open Space program in which a municipality can apply to for specific projects that they would like the County to cost share on. (*Bill Millette*)

Farmland Preservation Program Funding Expended to Date by Source

Union Township has an Open Space tax of \$0.02 per \$100 of assessed property value. This tax was established in 1998 to raise money for open space and farmland

preservation. The Township has spent \$566,712 to purchase farmland (as noted in the beginning of Chapter 4) and has also bonded their Trust Fund to purchase the former Douglass property which is being auctioned as a preserved farm. The bond was \$1.25 million for this project, the sale of which is expected to generate over \$1 million.

Union Township utilized their Open Space Trust Fund to acquire the Milligan Property, an open space project, which encompasses about 100 acres of the Township. The Township purchased this using a bond, which the Township is paying back through their Open Space Trust Fund. The Township's share of \$9,000,000 purchase of Milligan as of today is \$6,428,556.07. The Township has also appropriated \$1,600,000 for the acquisition of the Saxton property. These figures are not included in the chart on page 4-3 and 4-4, as these are open space acquisitions. The Township is aggressively bonded its Open Space Trust Fund to acquire both open space and farmland within their community.

The below table details the amount generated per year since 1999 and the percent change in the Trust Fund since that time.

Year	Tax Rate	Amount Generated by Taxation	Total Amount Generated	Percent Change
1999	\$0.02	\$85,255.00	\$85,255.00	
2000	\$0.02	\$90,668.00	\$175,923.00	6%
2001	\$0.02	\$94,775.00	\$270,698.00	5%
2002	\$0.02	\$126,348.00	\$397,046.00	33%
2003	\$0.02	\$134,926.00	\$531,972.00	7%
2004	\$0.02	\$150,000.00	\$681,972.00	11%
2005	\$0.02	\$131,394.00	\$813,366.00	-12%
2006	\$0.02	\$132,773.00	\$946,139.00	1%
2007	\$0.02	\$135,038.00	\$1,081,177.00	2%
2008	\$0.02	\$136,710.28	\$1,217,887.28	1%
2009	\$0.02	\$136,365.96	\$1,354,253.24	1%

There was a revaluation in 2002 which increased the amount generated for the Open Space Trust Fund. In 2005 the downturn in the amount of tax collected was due to the tax appeal (Foster Wheeler), but has now leveled out to an increase of about 1% per year. As of December 2009, Union Township has collected \$1,354,253.24 through its Open Space Trust Fund, but has bonded this fund and nearly 95% of the Trust Fund is dedicated towards payment of these bonds.

Monitoring of Preserved Farmland

The easement holder is responsible for the monitoring of preserved farms, depending on the program option (that is, the SADC is responsible for the monitoring of farms preserved through the Fee Simple and Direct Easement Programs). Hunterdon County and the CADB are responsible for the monitoring of most of the farms preserved in Union Township; the Soil Conservation District provides this service under contract to the County. If violations are suspected on the preserved land the Township and the AAC will notify the responsible agency.

Coordination with TDR Programs

Transfer of Development Rights (TDR) may be used in conjunction with the traditional Purchase of Development Rights (PDR) program; these two programs are not mutually exclusive. As previously discussed, Union Township is not currently enrolled in a TDR program.

¹ New Jersey Department of Agriculture, State Agriculture Development Committee. New Jersey Farmland Assessment data. 2006. Hunterdon County – Union Township.

² New Jersey Department of Agriculture. Farmland Soil Classification for 1995 Agricultural Land. Hunterdon County. March 14, 2007

³ New Jersey Department of Agriculture. New Jersey Farmland Preservation Program Listing of Preserved Farmland. Hunterdon County. October 1, 2008.

⁴ Hunterdon County Planning Department, Hunterdon County Agriculture Development Board. Hunterdon County Comprehensive Farmland Preservation Plan. 2008.

⁵ Comprehensive Master Plan and Background Analysis Report for Union Township, Hunterdon County, NJ, 1984 amended 1999.

⁶ Personal Communication with Bill Millette, Program Administrator, Hunterdon County Agricultural Development Board. October 22, 2008.

⁷ Township of Union, Hunterdon County, New Jersey. Deed of Easement between Anita Jane Manzione and the Township of Union. April 26, 2001.

⁸ Township of Union, Hunterdon County, New Jersey. Declaration of Covenants and Restrictions, Wellington West Subdivision. 1986, revised 1994.

⁹ Township of Union, Hunterdon County, New Jersey. Restriction and Conservation Easement on Lands in Block 15, Lot 5. July 6, 1990

¹⁰ Township of Union Planning Board Resolutions. Andino, Kutchman, and Greaves.

CHAPTER 5: FUTURE FARMLAND PRESERVATION PROGRAM



Preservation Goals

Union Township is 20.6 square miles (13,184 acres) in size. Of this, 3,837 are under farmland assessment, which includes croplands, woodlands, farm structures and wetlands/waterways that occur on an agricultural property. Since 1996, Union Township has preserved **790 acres** of farmland. Thus, **3,047 acres** of farm assessed land remains unprotected in Union Township.

The Union Township Agricultural Advisory Committee has identified 22 farm parcels covering **701 acres** to target for protection. These targeted farms are divided into four project areas. The Pittstown Project Area is located south of the Lehigh Valley Railroad and Main Street, the Hoffman Project Area is surrounds Hoffman Park, the Pattenburg Project Area is located to the west of Gravel Hill Road and County Road 614, and the Hampton-Spruce Run Project Area encompasses the lands north of I-78 and west of the Clinton Wildlife Management Area.

Based upon the State's Minimum Eligibility Criteria for productive soils and tillable land, **1,169 acres** are potentially eligible for farmland preservation in Union Township. According to the *New Jersey 2006 Farmland Assessment*, **2,996 acres** are in active agricultural land in Union Township. Thus nearly 40% of the active agricultural lands are potentially eligible for preservation through the State program.

The Township has identified 701 acres of farmland as “targeted” for preservation based upon the Hunterdon County Agriculture Development Area and the SADC's Minimum Eligibility Criteria for farmland. Utilizing innovative financing and dedicating the sale of municipal land towards the preservation of farmland, Union Township has identified the following goals for farmland preservation over the next ten years:

One year target:	100 acres
Five year target:	400 acres
Ten year target:	750 acres

Public Participation

For the development of this *Comprehensive Farmland Preservation Plan Update*, Union Township hosted two public meetings seeking input and direction from local residents, farmers, officials, and representatives of agencies and nonprofit organizations interested in farmland preservation. The first meeting was held near the beginning of plan development. In order to receive comments on the Draft Plan, the second meeting will be held after the Draft Plan has been released to the public.

Public Hearing #1 – November 5, 2008

The first public meeting was held on Wednesday, November 5, 2008 at the Union Township municipal building. This meeting was held as part of the regularly scheduled meeting of the Township Committee and noticed in advance of the meeting in the local newspapers. The purpose of the meeting was to present and discuss the proposed plan, seek input from the Committees on the draft maps identifying project areas and parcels for preservation.

Concerns raised by residents and landowners included the ability to amend the project areas at a later date and the impact of the Highlands Planning and Preservation Areas on farmland preservation. The timeline for the Plan was reviewed and questions answered by the members of the Agricultural Advisory Committee, Township Committee, and The Land Conservancy of New Jersey.

The notice and agenda for this public meeting are included in the *Appendix*.

Public Hearing #2 – January 17, 2010

The second meeting provided the opportunity for local residents and farmers to offer their input on the *Comprehensive Farmland Preservation Plan*. The meeting was held once comments were received on the *Draft Plan* from the Hunterdon CADB and SADC. The notice and agenda for this public meeting are included in the *Appendix*.

Project Area Summaries

As part of its 2008 *Comprehensive Farmland Preservation Plan*, the Hunterdon CADB identified seven project areas within the County's Agricultural Development Area for farmland preservation. The southern portion of Union Township falls within the West Project Area for Hunterdon County. The Union Township AAC identified four municipal project areas within the municipality focusing on agricultural lands which are productive, tillable, and enlarge existing preserved farm belts in the community. These four project areas are described below and shown on the *Project Area Map* included within this plan.

- Pittstown Project Area: Located in the southernmost corner of the Township, this project area contains five preserved farms, totaling **608 acres**. The project area extends north from Union Township's border with Franklin and Alexandria to the old Lehigh Valley Railroad tracks in the north and Main Street and Mechlin Corner

Road in the west. There are currently no pending applications within this project area.

- Hoffman Project Area: This project area is centered around Hoffman Park and lies in between Williamson Lane and Mechlin Corner Road. This project area does not contain any preserved farms, but does include a large tract of preserved open space. There are no pending applications within this project area.
- Pattensburg Project Area: This project area is bounded by Bethlehem and Alexandria Townships and is almost entirely west of Gravel Hill Road. This project area contains two preserved farms of **131 acres** and creates a belt of preserved farmland from Union Township into Bethlehem Township.
- Hampton-Spruce Run Project Area: This project area is located north of I-78 and west of the Clinton Wildlife Management Area. At present, it contains two deed restricted farms, totaling **29 acres** that were preserved by the Township.

Union Township has identified the Hampton-Spruce Run Project Area as an area of importance for farmland preservation in the Township. This project area is not within the County's ADA. The Township will identify targeted farms within this project area only upon interest by the landowners and subsequent approval by the SADC and CADB of expansion of the County ADA to include this project area. The PIG statute requires that all targeted farms be located within the County ADA. The CADB has indicated that if a landowner is willing to enter the farmland preservation program, they would review the ADA to expand it to include the productive agricultural lands west of the Clinton Wildlife Management area north of Hoffman Park. The Township has included the Hampton-Spruce Run Project Area within this *Comprehensive Farmland Preservation*, but will not identified targeted farms within this project area until such time the Hunterdon CADB approves amending the ADA to include this Project Area.

The Hunterdon CADB has a 40 acre minimum for applications seeking a county cost share; however it also allows for applications that are less than 40 acres if they adjoin or abut another preserved farm. This allows for the creation of larger blocks of preserved farms and infill of those areas, even if an application does not meet the 40 acre minimum. This flexibility in acreage is beneficial to Union Township as many of their targeted farms (*see Targeted Farm Map in the Appendix*) are located adjacent to preserved farms.

The below table summarizes the acreage and farm parcels within each of the Projects Area.

Project Areas	Total Farm Assessed Properties (Acres)	Unpreserved Farmland (Acres)	Preserved Farmland (Acres)	Other Preserved Farmland (Acres)
Hampton-Spruce Run	237.19	207.73	0.00	29.46
Hoffman	267.76	267.76	0.00	0.00
Pattensburg	357.90	226.63	131.27	0.00
Pittstown	1473.17	865.51	439.28	168.38
Total	2336.02	1567.63	570.55	197.84

Note: These numbers are from the GIS Parcel Data Analysis and include the entire parcel as "preserved". Thus this number is slightly different than the actual recorded data shown in Ch. 4.

Union Township has also identified specific farmland parcels for preservation within each of the Project Areas. The *Targeted Farms Map* identifies each of these farms and they are listed within the *Appendix* of this plan. The Pittstown Project Area includes 17 parcels targeted for preservation, Hoffman Project Area includes one parcel, Pattenburg Project Area includes four parcels, and Hampton-Spruce Run Project Area does not currently have parcels targeted for preservation as it is not currently within the County ADA.

Project Area Inventory

For each project area, an analysis was completed to identify the amount and density of preserved farmland, soils and size of the area. The following data was determined:

- i. The total acreage of targeted farms (2010 projects);
- ii. The total acreage of farms with final approval (2009 applications);
- iii. The total acreage of preserved farmland;
- iv. The total acreage of other deed restricted farmland;
- v. The total acreage of farms enrolled in the eight-year farmland preservation program or municipally-approved farmland preservation program;
- vi. The total acreage of preserved open space compatible with agriculture.

For each of the above categories, the land area within each project area is expressed as a ratio between the total acreage for each category and the total acreage of the project area. Also included is the percentage of each category expressed as a percentage of the total project area.

Other deed restricted farmlands are present in Union Township. Not all farmland has been preserved through the farmland preservation program. Nine properties within the Township have been deed restricted against further development for the purpose of the preservation of agriculture. All of these properties, totaling 220 acres, have been included as preserved farmland or “*other preserved farms*” in this Plan.

“*Open space compatible with agriculture*” was determined using the NJDEP land use/land cover data for tillable land.

The “*Density of the Project Area*” is presented as the sum of the acreages of items (ii) through (vi) (*see above*), as compared to the total acreage of the project area. These tables are presented below.

HAMPTON-SPRUCE RUN PROJECT AREA	Acreage	Density Ratio	Percentage
i. Targeted Farms (2010 Applications)	-	- : 397.89	0%
ii. Farms with Final Approval (2009 Applications)	-	- : 397.89	0%
iii. Preserved Farmland	-	- : 397.89	0%
iv. Other Deed Restricted Farmland	29.46	29.46 : 397.89	7%
v. Farms Enrolled in 8 Year Program	-	- : 397.89	0%
vi. Preserved Open Space Compatible with Agriculture	41.87	41.87 : 397.89	11%
Aggregate Size of Project Area:	397.89		
<i>Total Project Area Inventory: Items (i) through (vi):</i>	71.33	71.33 : 397.89	18%
<i>(Selected) Density of the Project Area (without targeted farms): Items (ii) through (vi):</i>	71.33	: 397.89	18%

HOFFMAN PROJECT AREA	Acreage	Density Ratio	Percentage
i. Targeted Farms (2010 Applications)	67.82	67.82 : 684.42	10%
ii. Farms with Final Approval (2009 Applications)	-	- : 684.42	0%
iii. Preserved Farmland	-	- : 684.42	0%
iv. Other Deed Restricted Farmland	-	- : 684.42	0%
v. Farms Enrolled in 8 Year Program	-	- : 684.42	0%
vi. Preserved Open Space Compatible with Agriculture	184.46	184.46 : 684.42	27%
Aggregate Size of Project Area:	684.42		
<i>Total Project Area Inventory: Items (i) through (vi):</i>	252	252 : 684.42	60%
<i>(Selected) Density of the Project Area (without targeted farms): Items (ii) through (vi):</i>	184.46	184.46 : 684.42	27%

PATTENBURG PROJECT AREA	Acreage	Density Ratio	Percentage
i. Targeted Farms (2010 Applications)	158.22	158.22 : 422.89	37%
ii. Farms with Final Approval (2009 Applications)	-	- : 422.89	0%
iii. Preserved Farmland	131.27	131.27 : 422.98	31%
iv. Other Deed Restricted Farmland	-	- : 422.89	0%
v. Farms Enrolled in 8 Year Program	-	- : 422.89	0%
vi. Preserved Open Space Compatible with Agriculture	-	- : 422.89	0%
Aggregate Size of Project Area:	422.89		
<i>Total Project Area Inventory: Items (i) through (vi):</i>	289.49	289.49 : 422.89	68%
<i>(Selected) Density of the Project Area (without targeted farms): Items (ii) through (vi):</i>	131.27	131.27 : 422.89	31%

PITTSTOWN PROJECT AREA	Acreage	Density Ratio	Percentage
i. Targeted Farms	475.41	475.41 : 2,683.74	18%
ii. Farms with Final Approval (2009 Applications)	-	: 2,683.74	0%
iii. Preserved Farmland	439.28	439.28 : 2,683.74	16%
iv. Other Deed Restricted Farmland	168.38	168.38 : 2,683.74	6%
v. Farms Enrolled in 8 Year Program	-	- : 2,683.74	0%
vi. Preserved Open Space Compatible with Agriculture	121.7	121.7 : 2,683.74	5%
Aggregate Size of Project Area:	2,683.74		
<i>Total Project Area Inventory: Items (i) through (vi):</i>	1,204.77	1,204.77 : 2,683.74	45%
<i>(Selected) Density of the Project Area (without targeted farms): Items (ii) through (vi):</i>	729.36	729.36 : 2,683.74	27%

For all Project Areas, the summary total is as follows:

ALL PROJECT AREAS SUMMARY	Acreage	Density Ratio	Percentage
i. Targeted Farms (2010 Applications)	701.45	701.45 : 4,188.94	17%
ii. Farms with Final Approval (2009 Applications)	-	: 4,188.94	0%
iii. Preserved Farmland	570.55	570.55 : 4,188.94	14%
iv. Other Deed Restricted Farmland	197.84	197.84 : 4,188.94	5%
v. Farms Enrolled in 8 Year Program	-	- : 4,188.94	0%
vi. Preserved Open Space Compatible with Agriculture	348.03	348.03 : 4,188.94	8%
Aggregate Size of Project Area:	4,188.94		
Total Project Area Inventory: Items (i) through (vi):	1,817.87	1,817.87 : 4,188.94	43%
(Selected) Density of the Project Area (without targeted farms): Items (ii) through (vi):	1116.42	1116.42 : 4,188.94	27%

Note: The acreage for "Other Deed Restricted Farmland" is slightly less because two of the farms are outside of the Project Areas and are not included in the acreage in these tables.

Minimum Eligibility Criteria

Minimum Eligibility Criteria are based upon the SADC's rules for farmland preservation and project eligibility (adopted *May 21, 2007*). In order to be eligible for preservation the site must be developable, have soils capable of supporting agricultural or horticultural production, and meet minimum tillable land standards. (N.J.A.C. 2:76-6.20) In summary:

For all lands less than or equal to 10 acres:

- The land must produce at least \$2,500 worth of agricultural or horticultural products annually; and
- At least 75% or a minimum of 5 acres of the land (whichever is less) must be tillable; and
- At least 75% or a minimum of 5 acres of the land (whichever is less) must be capable of supporting agriculture or horticulture; and
- The land in question must exhibit development potential as defined by the SADC (based upon zoning, ability to be subdivided, less than 80% wetlands, less than 80% slopes of 15% or more); or
- The land must meet the above criteria or be eligible for allocation of development credits pursuant to a Transfer of Development Credits (TDR) program.

For lands greater than 10 acres:

- At least 50% or a minimum of 25 acres of land (whichever is less) must be tillable; and
- At least 50% or a minimum of 25 acres of land (whichever is less) must have soils capable of supporting agriculture or horticulture; and
- The land in question must exhibit development potential as defined by the SADC; or

- The land must meet the above criteria or be eligible for allocation of development credits pursuant to a Transfer of Development Credits (TDR) program.

For a farm application to qualify for SADC cost share, the farm must have at least one parcel listed on the targeted farm list; be comprised of an assemblage of substandard parcels which together meet SADC minimum standards; or have sufficient justification by the Township Agricultural Advisory Committee (AAC) and the CADB that the parcels were not identified as targeted due to a specific mapping issue or other error.

The Township may proceed without State funding on projects that do not meet these Minimum Eligibility Standards. In all cases, the Union Township AAC will work closely with the Hunterdon CADB to review and process applications from landowners for farmland preservation. The Union Township AAC will follow all County and State procedures to ensure consistency in application review and processing.

Within the identified project areas, candidate farms (or “targeted farms” as referenced in the May 21, 2007 rules) are identified which meet the tillable land and soils minimum eligibility standards. In order to determine farms which are potentially eligible for preservation, a series of queries were made utilizing the ArcGIS 9.2 digital mapping software for soils and tillable land. These are described in further detail below.

Farmland that meets the SADC Criteria for Agricultural Soils

Soil acreage was determined using the Soil Survey as prepared by the Natural Resource Conservation Service for prime farmland soils, soils of statewide importance and soils of unique importance.

Farm parcels are sorted on size based upon the State Agriculture Development Committee (SADC) Minimum Eligibility Criteria for soils.

<u>Farm Size</u>	<u>Requirements</u>
0-6.667 acres	75% soils capable of supporting agricultural production
6.667-10 acres	5 acres of soils capable of supporting agricultural production
10-50 acres	50% soils capable of supporting agricultural production
50+ acres	25 acres of soils capable of supporting agricultural production

Farm parcels are sorted on size based upon the State Agriculture Development Committee (SADC) Minimum Eligibility Criteria for soils:

<u>Farm Size</u>	<u>Requirements</u>
0-6.667 acres	75% soils capable of supporting agricultural production
6.667-10 acres	5 acres of soils capable of supporting agricultural production
10-50 acres	50% soils capable of supporting agricultural production
50+ acres	25 acres of soils capable of supporting agricultural production

Farmland that meets the SADC Criteria for Tillable Land

Tillable acreage was determined using the N.J. Department of Environmental Protection 2002 Land Use/Land Cover mapping for agricultural lands. The land categories that are defined as the “tillable land” based on the 2002 NJDEP Land Use/Land Cover, are as follows:

- Agricultural Wetlands (Modified)
- Confined Feeding Operations
- Cropland and Pastureland
- Former Agricultural Wetland
- Orchards/Vineyards/Nurseries/Horticultural Areas
- Other Agriculture

Farm parcels were sorted on size based upon the SADC Minimum Eligibility Criteria for tillable land:

<u>Farm Size</u>	<u>Requirements</u>
0-6.667 acres	75% tillable
6.667-10 acres	5 acres tillable
10-50 acres	50% tillable
50+ acres	25 tillable acres

Farmland that meets SADC Criteria for both Tillable Land and Soils

Utilizing the tillable acreage and soil acreage, farm parcels were sorted on size based upon the State Agriculture Development Committee (SADC) Minimum Eligibility Criteria for tillable land and soils.

The Project Area Summaries and Minimum Eligibility Criteria analysis for each project area are presented in the tables below and GIS Maps (included within the *Maps Section* of this Plan). As stated earlier, for each category, the land area within each project area is expressed as a ratio between the total acreage for each category and the total acreage of the project area. Also included is the percentage of each category expressed as a percentage of the total project area.

HAMPTON-SPRUCE RUN PROJECT AREA	Acreage	Density Ratio	Percentage
Aggregate Size of Project Area:	397.89		
Soil Acreage using data from NRCS Soil Survey			
i. Total Acreage of Prime Farmland Soils	284.36	284.36 : 397.89	71%
ii. Total Acreage of Farmland Soils of Statewide Importance	31.69	31.69 : 397.89	8%
iii. Total Acreage of Unique Farmland Soils	-	- : 397.89	0%
Qfarm Parcel Analysis for Soils and Tillable Land			
i. Qfarm Parcels meeting SADC Criteria for Agricultural Soils	197.37	197.37 : 397.89	50%
ii. QFarm Parcels meeting SADC Criteria for Tillable Land	159.06	159.06 : 397.89	40%
iii. QFarm Parcels meeting SADC Criteria: Soils & Tillable Land	159.06	159.06 : 397.89	40%

Minimum Eligibility Criteria analysis for each project area: *(continued)*

HOFFMAN PROJECT AREA	Acreage	Density Ratio	
Aggregate Size of Project Area:	684.42		
Soil Acreage using data from NRCS Soil Survey			
i. Total Acreage of Prime Farmland Soils	410.68	410.68 : 684.42	60%
ii. Total Acreage of Farmland Soils of Statewide Importance	200.12	200.12 : 684.42	29%
iii. Total Acreage of Unique Farmland Soils	-	- : 684.42	0%
Qfarm Parcel Analysis for Soils and Tillable Land			
i. Qfarm Parcels meeting SADC Criteria for Agricultural Soils	243.23	243.23 : 684.42	36%
ii. QFarm Parcels meeting SADC Criteria for Tillable Land	119.89	119.89 : 684.42	18%
iii. QFarm Parcels meeting SADC Criteria: Soils & Tillable Land	119.89	119.89 : 684.42	18%

PATTENBURG PROJECT AREA	Acreage	Density Ratio	Percentage
Aggregate Size of Project Area:	422.89		
Soil Acreage using data from NRCS Soil Survey			
i. Total Acreage of Prime Farmland Soils	164.07	164.07 : 422.89	19%
ii. Total Acreage of Farmland Soils of Statewide Importance	183.32	183.32 : 422.89	18%
iii. Total Acreage of Unique Farmland Soils	-	- : 422.89	0%
Qfarm Parcel Analysis for Soils and Tillable Land			
i. Qfarm Parcels meeting SADC Criteria for Agricultural Soils	226.64	226.64 : 422.89	54%
ii. QFarm Parcels meeting SADC Criteria for Tillable Land	158.22	158.22 : 422.89	37%
iii. QFarm Parcels meeting SADC Criteria: Soils & Tillable Land	158.22	158.22 : 422.89	37%

PITTSTOWN PROJECT AREA	Acreage	Density Ratio	Percentage
Aggregate Size of Project Area:	2,683.74		
Soil Acreage using data from NRCS Soil Survey			
i. Total Acreage of Prime Farmland Soils	1,280.37	1,280.37 : 2,683.74	48%
ii. Total Acreage of Farmland Soils of Statewide Importance	1,114.06	1,114.06 : 2,683.74	42%
iii. Total Acreage of Unique Farmland Soils	-	- : 2,683.74	0%
Qfarm Parcel Analysis for Soils and Tillable Land			
i. Qfarm Parcels meeting SADC Criteria for Agricultural Soils	969.69	969.69 : 2,683.74	36%
ii. QFarm Parcels meeting SADC Criteria for Tillable Land	579.41	579.41 : 2,683.74	22%
iii. QFarm Parcels meeting SADC Criteria: Soils & Tillable Land	579.41	579.41 : 2,683.74	22%

For all project areas, the summary total is as follows:

ALL PROJECT AREAS SUMMARY	Acreage	Density Ratio	Percentage
Aggregate Size of Project Area:	4,188.94		
Soil Acreage using data from NRCS Soil Survey			
i. Total Acreage of Prime Farmland Soils	2,139.48	2,139.48 : 4,188.94	51%
ii. Total Acreage of Farmland Soils of Statewide Importance	1,529.19	1,529.19 : 4,188.94	37%
iii. Total Acreage of Unique Farmland Soils	-	- : 4,188.94	0%
Qfarm Parcel Analysis for Soils and Tillable Land			
i. Qfarm Parcels meeting SADC Criteria for Agricultural Soils	1,636.93	1,636.93 : 4,188.94	39%
ii. QFarm Parcels meeting SADC Criteria for Tillable Land	1,016.58	1,016.58 : 4,188.94	24%
iii. QFarm Parcels meeting SADC Criteria: Soils & Tillable Land	1,016.58	1,016.58 : 4,188.94	24%

There are a total of **1,017 acres** of farm assessed land (QFarm Parcels) that meet both the Minimum Eligibility Criteria for soils and tillable land.

There are **3,896 acres** of total assessed farmland in Union Township, of which approximately **1,017 acres** meet both the soils and tillable land Minimum Eligibility Criteria for farmland preservation. Since Union Township has excellent soils, tillable land is the limiting factor toward meeting the Minimum Eligibility Criteria. This presents a unique situation in which every parcel that meets the SADC Criteria for Tillable Land is eligible for farmland preservation. According to the *2006 New Jersey Farmland Assessment*, there are **2,996 acres** of active agricultural land in the Township, which accounts for 77% of the total assessed farmland. Of the assessed farmland in the Township, 30% of the existing farmland meets both the soils and tillable land Minimum Eligibility Criteria as defined by the SADC. Of the active agricultural land, nearly 40% meets both state criteria. Included within the *Appendix* is the complete list of potentially eligible parcels.

In addition to the State's new Minimum Eligibility Criteria, the SADC has also identified an "Eligible Farm" standard as defined in section 17.2 of the newly adopted rules. In this case, grant funding will be based upon an individual farm having a rank score that is "*equal to or greater than 70% of the county's average quality score of all farms granted preliminary approval by the SADC through the county easement purchase program and/or the county planning incentive grant program within the previous three fiscal years.*" The SADC has released this rank score for Fiscal Year 2009 for Hunterdon County; the minimum score for an Eligible Farm is 40. This information has not been updated by the SADC. (*Eligible Farm Standards 2008*)¹ A detailed score listing is included within the *Appendix*.

County and Municipal Ranking Criteria

The Township of Union does not have independent ranking criteria for prioritizing farmland applications. The Hunterdon CADB has used the state ranking criteria as the basis for calculating the rank of each farm prior to implementation of the County Planning Incentive Grant program. The CADB assesses the following for individual applicant

farms:

- the quality of the local soils
- local buffers and boundaries
- soil conservation and farm management practices
- municipal commitment to agriculture
- other financial commitment to agriculture

As the County transitions to the County Planning Incentive Grant program, the former state ranking forms will only be used to provide a qualification threshold, not a basis for comparing applications. In special cases where a farm is of special interest and the CADB purchases land without state funding, it may consider using this ranking system to prioritize farmland for preservation.

Union Township's ranking criteria are consistent with the County and State Ranking Criteria. The Township's Agricultural Advisory Committee and Township Committee is committed to preserving as much of the Township's agricultural land base as possible and supports innovative funding mechanisms and preservation tools. The focus of the Township's farmland preservation program is to preserve the productive agricultural landscape of the community.

Municipal and County Policies Related to Farmland Preservation Applications

Union Township follows the policies established by Hunterdon County regarding housing opportunities, division of premises, and exception areas. These policies are documented in the *2008 Hunterdon County Comprehensive Farmland Preservation Plan*. The Hunterdon CADB follows the SADC's policies regarding these issues and below is a brief summary of the state policies for each issue.

Approval of Housing Opportunities

Agricultural labor housing: Agricultural labor housing is not currently protected under the Right to Farm Act in the State of New Jersey. However, the State Agriculture Development Committee understands the need for this type of housing and does have a policy that a landowner must refer to in order to construct labor housing. These applications are reviewed by the State Agriculture Development Committee and the County Agriculture Development Board. The Township works with the farmland owner to ensure that every preserved farm is preserved with a housing opportunity onsite. In Union Township, agricultural labor housing is not a major concern, as most farm workers are day laborers and have their own housing.

House replacement: The policy of the State Agriculture Development Committee on house replacement is that requests for replacement of a residence on permanently preserved land must be reviewed and approved on an individual basis by the CADB and the SADC, in

order to minimize the impact on the agricultural operation. This is supported by the CADB and AAC for Union Township.

Residual dwelling site opportunity allocation: Residual Dwelling Site Opportunities (RDSOs) are lingering potential housing prospects located within a deed-restricted farm. By designating an area as an RDSO, the landowner is implying that the land will be used for a residential unit or other structure as referred to in N.J.A.C. 2:76-6.17. The maximum RDSO density is one residence per 100 acres. The purpose of the building in question must be for “single-family residential housing and its appurtenant uses.” (2007 SADC Appraiser Handbook)² To qualify as an RDSO, the SADC requires that the use of the residential unit be for agricultural purposes and “at least one person residing in the residential unit shall be regularly engaged in common farm site practices.” This is supported by the Union Township AAC and Hunterdon CADB.

Division of the Premises

The goal of the SADC, supported by the Hunterdon CADB and Union Township AAC, is to preserve large tracts of farmland. Therefore, a division of the premises is not an encouraged practice; however when division occurs it must be for agricultural purposes and must result in agriculturally viable land parcels. The CADB is accepting of division of a farm only if it results in a more productive smaller farm. A landowner wishing to divide permanently preserved farmland must submit a written request. The application must be approved, in writing, by both the State Agriculture Development Committee and the CADB.

Approval of Exception

Exceptions are defined by the SADC as “acres within a farm being preserved” which are “not subject to the terms of the deed of easement.” When an exception is made, the landowner does not receive any compensation in the excepted area. Exceptions are not a practice that is encouraged by the SADC and, when they occur, it is recommended that they should be as small as possible. There are two types of exceptions that can occur; severable and non-severable.

Severable: A severable exception is defined by the SADC as an “area which is part of an existing Block and Lot owned by the applicant which will be excluded from the restrictions of the Deed of Easement and may be sold as a separate lot in the future.” (2007 SADC Appraiser Handbook) A severable exception is made “if a landowner wants to be able to sell the excepted area separate from the deed-restricted farm.”

Non-severable: Non-severable exceptions are defined by the SADC as “area which is part of an existing Block and Lot owned by the application that will not be subject to the restrictions of the Deed of Easement but cannot be sold separately from the remaining premises.” (2007 SADC Appraiser Handbook) Unlike a severable exception, a non-severable exception is “always attached to the protected farm.”

Exceptions made to farmland have the potential to impact the value of the property. When an appraisal occurs, both severable and non-severable exceptions are considered in the determination of the restricted/ after value of the property. The Hunterdon CADB generally discourages servable exceptions.

Funding Plan

Installment Purchases and Donation/Bargain Sales

Union Township is supportive of donation/bargain sales and installment purchases. Both of these tools serve to leverage limited funding resources and are described below:

Donation and Bargain Sale: This mechanism for preserving a farm involves a donation by the landowner. If the landowner donates a portion of the value of the development rights when an easement is sold, this is called a bargain sale. A bargain sale can result in substantial tax savings for the landowner and can stretch all farmland preservation funds. The landowner donation is a reduction in the amount of gain that is subject to the capital gains tax, and the landowner can take a tax deduction for the amount donated against his or her federal and state income taxes.

Installment Purchase: Through an installment purchase agreement, development rights may be acquired through a payment plan that provides payments to the landowner over time. Receiving the income from the sale in installments may provide the landowner with financial management and/or tax advantages.

Overview of Hunterdon County Trust Fund and Municipal PIG requirements

As reported in the Hunterdon County *Comprehensive Farmland Preservation Plan*, the County has a diverse preservation program for open space, historic sites, and farmland preservation:

“...commencing January 1, 2000 and ending December 31, 2004, Hunterdon County has collected a total of \$23,718,415.72, which has been successfully used and leveraged by the County to acquire approximately 2,430 acres of additional parkland and open space and preserve another 7,384 acres of farmland. Of the total collected, Hunterdon County allocated \$2,371,841.57 each year to its municipalities and to area nonprofit organizations for additional open space preservation. Thus far, nineteen (19) municipalities have received a total of \$1,949,572.89 from their respective allocation of County funds to preserve approximately 3,211 acres for farmland and open space preservation including the preparation of relevant plan elements of municipal master plan and other eligible project expenses. Seven (7) municipalities have requested their allocation of funds be reserved and banked for future year considerations. Similarly, six (6) nonprofit organizations have individually applied and submitted fourteen (14) applications, in the total amount of \$2,097,069.88, to preserve approximately 1,103 acres of more land for open space preservation and conservation purposes. The lands that have been preserved by nonprofit organizations constitute a total market value of

\$10,501,858.18. Generally speaking, the County and municipalities split 40% of the cost. The remaining 60% is paid by the State.”

“Hunterdon County allocated an additional \$1,984,500.00 in 2006 for its municipalities and area nonprofit organizations for continued open space preservation purposes. This amount constitutes 15% of the total tax collected in 2005, which was previously authorized in the amount of \$6,315,000.00 during the beginning of 2004, and as part of the second five-year Open space Tax Referendum and approved Question. The remainder of Hunterdon County's Open Space Tax revenue will be used to continue funding the County Farmland Preservation Program acquiring lands for the Hunterdon County Park System and to preserve, renovate and restore County-owned historic structures, sites and facilities.”

“Thus far, a total of \$37 million has been collected for the preservation of over 22,203 acres of farmland, 2939 acres of County parkland, and 5622 total acres of municipal and nonprofit land acquisitions. Prior to the passage of the Hunterdon County Open Space, Recreation, Farmland and Historic Preservation Trust Fund in 1999, the County spent over \$23.5 million from capital funds on the purchase of approximately 5,400 acres of parkland. Most of these purchases were fee simple, rather than easements, and averaged \$4000 per acre in County contributions.” (Hunterdon County Comprehensive Farmland Preservation Plan)³

For farmland preservation purposes, the County and the municipalities split 40% of the cost with the State usually paying about 60% under most program options including the County and Municipal PIG programs.

As part of the Municipal PIG program, Hunterdon County utilizes the following formula for financial participation, as documented in their *Comprehensive Farmland Preservation Plan*:

“Based on a formula that commits the state to pay a higher percentage of lower cost per acre easements, the SADC provides between 60% and 80% of the funds to acquire a development easement on a farm. Hunterdon County and the municipality, in years past, have equally split the difference, typically 20% municipal and 20% county funds. The County now employs a modified cost share formula based on the appraised value of the farm to determine how the cost share amount is split between the county and the municipality. The formula is shown below:

<u>Appraisal value in \$/acre</u>	<u>% Increase in municipal cost share</u>
5,000 or less	0
5,001 to 7,000	1
7,001 to 9,000	2
9,001 to 11,000	3
11,001 and greater	4

This allows for a more even distribution of county dollars so that municipalities that garner a higher per acre value do not absorb the majority of county money available. The reverse of this is also true; municipalities with lower per acre prices will not suffer under this sliding scale system.” (Hunterdon County Comprehensive Farmland Preservation Plan)

As documented in the following section, it is estimated that the average price per acre in Union Township is approximately \$7,900 per acre. Thus, the municipal cost share will increase by 2% for projects done in partnership with the Hunterdon CADB for Union Township.

Overview of SADC “sliding scale”

As part of the municipal PIG program, the SADC will cost share on an easement which has been, or is being acquired, by a municipality. The SADC will not authorize a grant for greater than 80% of the SADC’s certified fair market value of the development easement. If the landowner’s asking price is greater than the certified fair market value, the SADC’s cost share grant shall be based upon the SADC’s certified fair market value. However, if a landowner asks for a higher price, the transaction cannot be for an amount higher than the higher of two independent appraisals. If the landowner accepts less than the certified value, the SADC will apply its cost share “sliding scale” formula to the discounted per acre value and share in a portion of the discount.

The SADC percent cost share is based upon the following sliding scale:

Landowner's Asking Price	Percent Committee Cost Share
From \$0.00 to \$1,000	= 80% above \$0.00
From > \$1,000 to \$3,000	= \$800 + 70% above \$1,000
From > \$3,000 to \$5,000	= \$2,200 + 60% above \$3,000
From > \$5,000 to \$9,000	= \$3,400 + 50% above \$5,000
From > \$9,000 to \$50,000	= 60%
From > \$50,000 to \$75,000	= \$30,000 + 55% above \$50,000
From > \$75,000 to \$85,000	= \$43,750 + 50% above \$75,000
From > \$85,000 to \$95,000	= \$48,750 + 40% above \$85,000
From > \$95,000 to \$105,000	= \$52,750 + 30% above \$95,000
From > \$105,000 to \$115,000	= \$55,750 + 20% above \$105,000
From > \$115,000	= \$57,750 + 10% above \$115,000

Description of Municipal Funding Sources

The Union Township Open Space Trust Fund was approved in 1998, and has collected \$0.02 per \$100 of assessed valuation per year since 1999. *(See Chapter 4 for a detailed analysis of the municipal Open Space Trust Fund on Pages 4-11 and 4-12).* The Fund generated 136,366 in 2009.

Union Township has bonded its Trust Fund to finance both farmland and open space projects. This has accelerated the Township’s ability to proactively preserve land. This

bond has funded the purchase of the Saxton, Douglass, Hoffman, and Milligan properties. For each of the properties the municipality purchases through the bond, the Township applies to the state and county for reimbursement funding.

Union Township utilized their Open Space Trust Fund to acquire the former Milligan property, an open space project. The Township's share of the \$9,000,000 purchase of Milligan as of today is \$6,428,556. The Township also appropriated \$1,600,000 for the acquisition of the Saxton property and bonded \$3 million to purchase the Hoffman property for open space. Union Township bonded to purchase the Douglass Farm (\$1.25 million) and anticipates receiving slightly over \$1 million when it is auctioned as a preserved farm. The funds generated by this sale will be deposited into the municipal Open Space Trust Fund to support future acquisitions.

As of December 2009, Union Township has collected \$1,354,253.24 through its Open Space Trust Fund, but has bonded this fund and nearly 95% of the Trust Fund is dedicated towards payment of these bonds.

Cost Projections and Funding Plan Associated with Preservation Goals

The Union Township Farmland Preservation and Open Space Trust Fund generated \$136,710 in 2008. As of August 2008, there are 15 farms preserved in Union Township, protecting 790 acres. Including all of these acquisitions, the average cost is \$5,630 per acre to purchase a development easement on the farms

Currently the Township pays the debt service for the bond repayment through the Farmland Preservation and Open Space Trust Fund. The ten-year financial analysis is based on the assumption that the Township is reimbursed for its acquisitions purchased through the bond through application to the CADB and SADC. To complete the cost projections the following additional assumptions were made for the Township:

- 1) assume the Trust Fund allocation is \$136,710 in 2008
- 2) assume 5% funding growth for the Trust Fund
- 3) assume municipal funding is reduced 3% for due diligence (administrative costs)
- 4) assume the Township spends the annual allocation in the Trust Fund and does not carry a balance
- 5) assume municipal funding is reduced 95% by prior acquisitions
- 6) assume the proceeds from the sale of the Douglass Farm by the Township will be dedicated to farmland preservation: \$100,000 per year for 10 years (will increase at a rate of 3% per year)
- 7) assume the average price per acre is \$7,900 in 2008
- 8) assume 7% annual increase in the average cost per acre
- 9) assume Township is purchasing land in partnership with County and State (no direct purchase by Township)
- 10) assume the municipal cost share is on average 15%, but for this analysis a variety of cost shares are calculated, using 15% as the minimum participation.

Based upon the above assumptions, the following analysis was completed to calculate the funding available to Union Township for farmland preservation:

	Year	Annual OS Trust Funding	OS Funding Available Less Administrative Costs and Debt Service	Total Available Funding (unencumbered OS Trust and Proceeds of Douglas Property)	Average Cost per Acre
1	2009	\$ 136,710.00	\$ 6,630.44	\$ 106,630.44	\$ 7,900.00
2	2010	\$ 143,545.50	\$ 6,961.96	\$ 109,961.96	\$ 8,453.00
3	2011	\$ 150,722.78	\$ 7,310.05	\$ 113,400.05	\$ 9,044.71
4	2012	\$ 158,258.91	\$ 7,675.56	\$ 116,948.26	\$ 9,677.84
5	2013	\$ 166,171.86	\$ 8,059.34	\$ 120,610.22	\$ 10,355.29
6	2014	\$ 174,480.45	\$ 8,462.30	\$ 124,389.71	\$ 11,080.16
7	2015	\$ 183,204.48	\$ 8,885.42	\$ 128,290.65	\$ 11,855.77
8	2016	\$ 192,364.70	\$ 9,329.69	\$ 132,317.07	\$ 12,685.67
9	2017	\$ 201,982.93	\$ 9,796.17	\$ 136,473.18	\$ 13,573.67
10	2018	\$ 212,082.08	\$ 10,285.98	\$ 140,763.30	\$ 14,523.83

Using the above funding formula, and the average cost per acre in Union Township, an analysis was completed to calculate the amount of land that could be purchased in Union Township. The analysis was run at 5% intervals. At a 15% municipal cost share with the county and state, the Township could preserve 90 acres in the first year, 419 acres within five years, and 767 acres after ten years.

	Year	15% Township Cost Share (acres preserved)	20% Township Cost Share (acres preserved)	25% Township Cost Share (acres preserved)	30% Township Cost Share (acres preserved)	35% Township Cost Share (acres preserved)	40% Township Cost Share (acres preserved)	45% Township Cost Share (acres preserved)
1	2009	90	67	54	45	39	34	30
2	2010	87	65	52	43	37	33	29
3	2011	84	63	50	42	36	31	28
4	2012	81	60	48	40	35	30	27
5	2013	78	58	47	39	33	29	26
6	2014	75	56	45	37	32	28	25
7	2015	72	54	43	36	31	27	24
8	2016	70	52	42	35	30	26	23
9	2017	67	50	40	34	29	25	22
10	2018	65	48	39	32	28	24	22
	Total acres preserved:	767	575	460	383	329	287	256

Cost Projections Associated with Preservation Goals

An estimate was also completed to determine the cost share funding from the County and State. Based upon the average easement values and the SADC sliding scale, it is assumed that the Township's cost share will be between 15% and 20%. Using this as a basis, and assuming the available funding from the Township is limited as determined above, the following analyses were completed:

	Year	Average Cost per Acre	Acres Preserved at 15% Township Cost Share	15% Township Cost Share	15% County Cost Share	70% State Cost Share	Total Project Cost
1	2009	\$ 7,900.00	90	\$ 106,630.44	\$ 106,630.44	\$ 497,608.70	\$ 710,869.57
2	2009	\$ 8,453.00	87	\$ 109,961.96	\$ 109,961.96	\$ 513,155.80	\$ 733,079.71
3	2010	\$ 9,044.71	84	\$ 113,400.05	\$ 113,400.05	\$ 529,200.25	\$ 756,000.36
4	2011	\$ 9,677.84	81	\$ 116,948.26	\$ 116,948.26	\$ 545,758.53	\$ 779,655.05
5	2012	\$ 10,355.29	78	\$ 120,610.22	\$ 120,610.22	\$ 562,847.68	\$ 804,068.11
6	2013	\$ 11,080.16	75	\$ 124,389.71	\$ 124,389.71	\$ 580,485.31	\$ 829,264.73
7	2014	\$ 11,855.77	72	\$ 128,290.65	\$ 128,290.65	\$ 598,689.68	\$ 855,270.98
8	2015	\$ 12,685.67	70	\$ 132,317.07	\$ 132,317.07	\$ 617,479.68	\$ 882,113.83
9	2016	\$ 13,573.67	67	\$ 136,473.18	\$ 136,473.18	\$ 636,874.84	\$ 909,821.20
10	2017	\$ 14,523.83	65	\$ 140,763.30	\$ 140,763.30	\$ 656,895.40	\$ 938,422.00
		total acres:	767	\$ 1,229,784.83	\$ 1,229,784.83	\$ 5,738,995.87	\$ 8,198,565.53

	Year	Average Cost per Acre	Acres Preserved at 20% Township Cost Share	20% Township Cost Share	20% County Cost Share	60% State Cost Share	Total Project Cost
1	2009	\$ 7,900.00	67	\$ 106,630.44	\$ 106,630.44	\$ 319,891.31	\$ 533,152.18
2	2009	\$ 8,453.00	65	\$ 109,961.96	\$ 109,961.96	\$ 329,885.87	\$ 549,809.78
3	2010	\$ 9,044.71	63	\$ 113,400.05	\$ 113,400.05	\$ 340,200.16	\$ 567,000.27
4	2011	\$ 9,677.84	60	\$ 116,948.26	\$ 116,948.26	\$ 350,844.77	\$ 584,741.29
5	2012	\$ 10,355.29	58	\$ 120,610.22	\$ 120,610.22	\$ 361,830.65	\$ 603,051.08
6	2013	\$ 11,080.16	56	\$ 124,389.71	\$ 124,389.71	\$ 373,169.13	\$ 621,948.55
7	2014	\$ 11,855.77	54	\$ 128,290.65	\$ 128,290.65	\$ 384,871.94	\$ 641,453.23
8	2015	\$ 12,685.67	52	\$ 132,317.07	\$ 132,317.07	\$ 396,951.22	\$ 661,585.37
9	2016	\$ 13,573.67	50	\$ 136,473.18	\$ 136,473.18	\$ 409,419.54	\$ 682,365.90
10	2017	\$ 14,523.83	48	\$ 140,763.30	\$ 140,763.30	\$ 422,289.90	\$ 703,816.50
		total acres:	575	\$ 1,229,784.83	\$ 1,229,784.83	\$ 3,689,354.49	\$ 6,148,924.15

In summary, the total estimated project costs and partnership costs (Township, County and State) to achieve the 1, 5, and 10 year goals for the Union Township farmland preservation program are as follows at 15% and 20% of municipal funding:

	Acres Preserved at 15% Township Cost Share	15% Township Cost Share	15% County Cost Share	70% State Cost Share	Total Project Cost
Year 1	90	106,630	106,630	497,609	710,870
Years 1-5 (2009 - 2013)	419	567,551	567,551	2,648,571	3,783,673
Years 1-10 (2009 - 2018)	767	1,229,785	1,229,785	5,738,996	8,198,566

	Acres Preserved at 20% Township Cost Share	20% Township Cost Share	20% County Cost Share	60% State Cost Share	Total Project Cost
Year 1	67	106,630	106,630	319,891	533,152
Years 1-5 (2009 -2013)	314	567,551	567,551	1,702,653	2,837,755
Years 1-10 (2009 -2018)	575	1,229,785	1,229,785	3,689,354	6,148,924

Farmland Preservation Program Administrative Resources

Staff resources

The Township of Union has an Agricultural Advisory Committee (AAC) that meets every month. Paige DiRoberto is the Chair for this Committee. The AAC works with the Township Committee, Municipal Clerk and attorney to track all farmland preservation projects for the Township, including applications and status.

Legal support

Legal support for Union Township's farmland preservation program is provided by the municipal attorney, Peter Jost.

Database Development and Geographic Information System Resources

The Township's engineer and planner provide Geographic Information System mapping services for the Union Township.

Factors Limiting Farmland Preservation Implementation

The high rate of farmland preservation in Union Township has been attributable to the willingness and the ability of the Township to leverage its own funding to protect farmland. Bonding for land preservation and proactively working with local landowners to protect their farms, has led the way for preserving additional land in the future. Union Township strongly supports the creation of a municipal PIG program and funding from the state is critical to the integrity of such a program. Due to the uncertainty in state funding for

farmland preservation after 2009, Union Township's program faces financial challenges as it moves forward in purchasing and preserving land during the next ten years.

In addition, there is concern among farmland owners in Union Township, particularly those that own farmland in the Preservation Area of the Highlands, that there will be inadequate state funding to purchase and preserve land, if they chose to preserve their land in the future.

All governmental bodies have seen a decrease in revenue with the drop in taxes being collected associated with the lower home prices. Hunterdon County has seen a drop in the amount collected in its Open Space Trust and as such limited the amount allocated to farmland and open space projects to those that can be funded with the money taken in by the County's Open Space tax within that given year. The percentages allocated to each program have not changed, however the Board of Chosen Freeholders are currently reviewing the allocation breakdown to determine if a change is needed given the new (lower) funding amounts being brought in via the County Open Space tax.⁴

Union Township currently does not have a formula in place that guides allocation of dedicated tax revenues between open space, farmland and historic preservation. Each preservation opportunity is looked at on a case by case situation and is need based.

¹ State Agriculture Development Committee, Minimum Standards for "Eligible" Farm. July 24, 2008. <http://www.state.nj.us/agriculture/sadc/farmpreserve/programs/pig2008countyqualityscores.pdf>

² State Agriculture Development Committee, New Jersey Farmland Preservation Program Appraiser Handbook. May 24, 2007. www.state.nj.us/agriculture/sadc/appraiserhandbook.pdf

³ Hunterdon County Planning Department, Hunterdon County Agriculture Development Board. Hunterdon County Comprehensive Farmland Preservation Plan. 2008.

⁴ Personal Communication, Bill Millette, Hunterdon CADB, January 2010.

CHAPTER 6: ECONOMIC DEVELOPMENT



With 3,896 acres in farmland assessment, Union Township greatly contributes to the agricultural landscape of Hunterdon County. While it only composes about 5% of the County land base, Union Township contains some of Hunterdon's most valuable soils. (*Union Township Master Plan*)¹ Corn and hay form the economic base of the farming industry in Union Township. Hay farmers have a strong local market in the Township's horse farms, which are a direct local market. Building upon this are the ancillary businesses and infrastructure which support the Township's farmers. Throughout the state, the marketing and profitability of the agricultural industry has gained renewed focus. The farmland preservation program is a critical component of the farming industry, and the success of the farmland preservation program in Union Township is not measured only by acres preserved, but also by the programs put in place to support the farmers and their businesses. The Township's agricultural community and its supporting groups and agencies understand that a farmland preservation program constitutes more than the act of preserving land. In order to be a full partner in a successful farmland preservation program, agriculture as an industry must be vibrant, self-sustaining, and innovative.

The State of New Jersey offers Union Township farmers a number of support agencies and programs ranging from technical advice to farm loans. The New Jersey Department of Agriculture (NJDA) *Smart Growth Tool Kit* provides information to support municipal and county government, businesses, non-profit groups, and local citizens in their efforts to achieve the goals and objectives outlined in the NJDA *Agricultural Smart Growth Plan for New Jersey, 2006*. (*Agricultural Smart Growth Tool Kit*)² (*2006 Agricultural Smart Growth Plan*)³ The Tool Kit embraces the five components that have been identified by NJDA as critical for the future of farming: Farmland Preservation, Innovative Conservation Planning, Economic Development, Agriculture Industry Sustainability, and Natural Resource Conservation.

As part of this emphasis on the business of agriculture, the NJDA has issued its 2008 "Economic Development Strategies", which identifies and proposes strategies to expand and strengthen various sectors of the agriculture industry in New Jersey, including produce, horticulture, dairy, livestock and poultry, field crops, organic, equine, wine, and Agritourism. The NJDA observes that "*local access to large affluent markets has long been an advantage for the marketing of (those) products. While our markets are still there, competition for those markets has become tougher. New Jersey's (produce) industry must continually work to rediscover its competitive advantages, improving access to nearby markets and strengthening consumer loyalty.*" (*2008 Economic*

Development Strategies)⁴ Union Township farmers continue to look for ways to explore new markets, promote their products, and increase the profitability of their agricultural operations.

2008 NJDA Economic Development Strategies

One of the major efforts undertaken by the NJDA is to identify products grown in New Jersey through branding, Agritourism, farm direct sales programs, and farm markets. The NJDA *Economic Development Strategies* for 2008 support the promotion of Jersey products through a variety of markets and mechanisms. (*2008 Economic Development Strategies*) NJDA is committed to promoting Agritourism through the New Jersey Office of Travel and Tourism, the Jersey Fresh website, the distribution of printed materials, and other forms of advertisement. Union Township farmers benefit from this state-wide effort.

NJDA's Jersey Fresh and Jersey Grown labels program is expanding its efforts to promote locally grown produce. The Department will continue to increase the Jersey Fresh Hospitality Industry Program. This program works closely with industry to market Jersey Fresh produce to the hotel, restaurant, educational, and institutional food services. This will strengthen the appeal of the Jersey Fresh brand to supermarket chains and all other retailers. The goal is to increase the use of the Jersey Fresh brand name and discourage the use of the "Locally Grown" product claim. Also, by recently establishing the Jersey Organic brand, the Department will continue to promote New Jersey grown organic products as distinct from, and of higher value than, competing products. (*2008 Economic Development Strategies*)

The following is a brief discussion of each of the sectors of Union Township's agriculture industry as they relate to the 2008 "*Economics Development Strategies*" report. For each of the sectors, the 2008 report indicates that farmers should continually seek new local, state, and interstate markets to strengthen market share.

Produce, which includes fruits and vegetables such as pumpkins, tomatoes, sweet corn, and squash covered 63 acres in Union Township in 2006. (*New Jersey Farmland Assessment 2006*)⁵ Since vegetables do not require as much land to grow, Township farmers should consider expanding the produce sector of the agricultural economy as opportunities arise. Some strategies Union Township farmers could follow are:

- Support the *Jersey Fresh Hospitality Program* and look for ways to implement it in Union Township;
- Promote the *Jersey Fresh* brand;
- Explore "Contract Growing", that is, growing produce for specific customers on a contract basis;
- Promote farm markets and pick-your-own operations; and,
- With the County, explore various additional products and markets for produce, including local restaurants, grocery markets, and institutions such as schools, hospitals and prisons. The Edna Mahan Correctional Facility for Women, located

along I-78, could serve as an opportunity to expand the market with little to no transportation cost.

Nursery, greenhouses, and floriculture, which includes trees and shrubs, Christmas trees, and bedding plants, covered 63 acres in Union Township in 2006. (*New Jersey Farmland Assessment 2006*) Christmas tree farms, which occupy 41 of the 63 acres, are by far the dominant nursery crop grown in the Township. Union Township can continue to strengthen and expand this sector of the agriculture economy as opportunities arise. Some strategies to follow are:

- Support efforts by NJDA to ensure plant health and disease-free material;
- Increase local consumer awareness of the *Jersey Grown* brand;
- Help farmers seek contracts with large box store operations such as Home Depot and Lowes; and,
- Promote “drive up” operations where consumers can buy directly from the nursery or greenhouse.

Dairy is not currently one of the dominant agricultural sectors in Hunterdon County. As of 2006, Union Township did not have any land dedicated specifically to dairy farming. (*New Jersey Farmland Assessment 2006*) A combination of high input costs (land prices and taxes) and low milk prices may be responsible for the absence of this industry within the Township. As costs only continue to rise, it may be too expensive to re-introduce a dairy industry in Union Township.

Corn for grain, silage and sweet edible covered approximately 78 acres in Union Township in 2006. (*New Jersey Farmland Assessment 2006*) The majority (52 acres) is grown for grain, with sweet and silage second and third, respectively. Corn for grain has historically been one of the dominant field crops throughout Hunterdon County and Union Township, second only to hay. Corn requires relatively less labor and cost inputs than produce, nurseries, greenhouses, and livestock, making it more profitable. It is also grown on livestock farms as feed for animals. Union Township can continue to strengthen and expand this sector of the agriculture economy as opportunities arise. Some strategies to follow are:

- Support efforts by the County and State to produce renewable fuels, thus adding a ready market for corn; and,
- Support the livestock industry which uses corn as feed.

Hay constitutes the largest portion of Union Township’s agriculture activity. It covered 980 acres within the Township in 2006, accounting for nearly one third of agricultural land use. (*New Jersey Farmland Assessment 2006*) In Union Township, a portion of the hay grown is used as feed on livestock farms, never making it to market, and is therefore not included in any Census sales figures. The majority, however, is sold to local horse farms. To continue and expand this strong sector of the agriculture economy, Union Township could employ some of the following strategies:

- Explore new markets, and also ways to expand existing markets; and,
- Support the livestock industry which uses hay as feed.

Soybeans were not grown in Union Township in 2006. (*New Jersey Farmland Assessment 2006*) If interested in starting profitable soybean production, Union Township could consider some of the following strategies:

- Encourage the production of certified organic soybeans to increase the value of these crops; and,
- Support efforts to construct bio-diesel production and soybean crusher facilities in the state to create new markets for soybean growers and potentially elevate the price of locally produced soybeans.

Livestock and poultry operations include non-dairy cattle, sheep, goats, hogs, and poultry.

Poultry, which includes egg production, turkeys, and ducks, is the most common livestock industry in Union Township. The Township had 422 chickens for egg production, as well as 50 meat chickens in 2006. (*New Jersey Farmland Assessment 2006*) There are not currently any farms in Union Township that raise ducks or turkeys.

Hog, sheep, and goat farms also constitute a sector of the Union Township agricultural landscape. In 2006, farms in the Township had 135 sheep, 16 hogs, and 14 goats. These numbers are second only to poultry in Union Township's livestock industry.

To strengthen and expand its place in the county economy, some non-dairy cattle, sheep, hogs, and poultry strategies Union Township could follow are:

- Help ensure animal health;
- Explore various additional products and markets, including local restaurants and grocery markets;
- Work with the County to promote livestock veterinary services in the area. There is currently a pre-veterinary program at Hunterdon County Polytechnic that focuses on the care of large animals; and,
- Assist farmers with farming techniques, regulatory requirements and the latest research for livestock and poultry.

Equine farms tend to be small in scale, but common among town residents who raise equine for private rather than commercial use. In 2006, there were 87 head of equine in the Township. A total of 34 acres is devoted to equine, the majority of which (31 acres) is used for boarding. (*New Jersey Farmland Assessment 2006*) To continue and expand the Township's market share in the county and state equine industry, especially with its abundant supply of hay, Union Township farmers can:

- Create a Union Township Equine Directory;
- Create a Union Township Equine Advisory Board; and
- Continue to support and partner with the trails association (Pittstown Trails)

Organic Farming, including crops and animals, is a potentially important market for Union Township and Hunterdon County. With the increased consumer awareness in food production, organic products and the markets that support them will continue to gain

a stronghold on the agricultural economy and become more “mainstream” as people demand high quality, readily accessible, and affordable, organic products. New Horizon Plant Farm, located in Hampton, is a NOFA certified farm, offering herbs, vegetables, and flowering plants. (*Jersey Fresh*)⁶ Certification of organic farms is regulated by the U.S. Department of Agriculture via the Organic Food Production Act of 1990, and can be somewhat costly and time consuming as compared to non-organic farming. This may dissuade some farmers otherwise amenable to this type of farming. “Natural” farming is a type of farming that seeks to emulate organic farming, but is not overseen by laws or regulations, as is organic farming. Natural farming is somewhat less costly and time consuming than “organic”, and therefore may be a viable option for some farmers and their potential customers. With its strong produce sector, Hunterdon County is in an excellent position to facilitate the market growth of organic and natural agriculture products. The County and Township can:

- Improve marketing of organic and natural produce;
- Explore various additional markets, including local restaurants and grocery markets;
- Promote Agritourism for organic and natural farms stands;
- Work with NJDA to expand the “Jersey Organic” Brand as a way to promote and market organic products;
- Educate growers about organic and natural regulatory and certification requirements; and,
- Explore ways to support organic food growing and processing.

Agritourism is one link in the long term sustainability of Union Township’s agriculture industry. According to the 2008 *Economic Development Strategies*, “... agri-tourism offers an important opportunity to generate additional farm income and keep farms economically viable. Agri-tourism presents opportunities for New Jersey growers seeking to add value to their crops and/or capture more of the market price of their products by directly accessing consumers. Many residents consider agriculture a novelty and something to be explored and enjoyed. They desire to share the agricultural experience while increasing farm income at the same time.” (2008 *Economic Development Strategies*) Agritourism can not only draw people from throughout Hunterdon County, but can also draw visitors from the neighboring states of New York and Pennsylvania.

Union Township currently supports Agritourism through several roadside farm stands, farmer’s markets, and pick-your-own operations. Peaceful Valley Orchards, located in Pittstown, is the location for most of the Township’s agritourism. As of 2006 Union Township also has 41 acres of Christmas Trees, which support seasonal Agritourism. (*New Jersey Farmland Assessment 2006*) To further promote Agritourism, the County and Township can also consider establishing a permanent signage program to alert and direct tourists, and local residents, to farm stands and nursery establishments. Signage could help increase business, and thus income.

The county’s Agritourism program is highlighted by the brochure entitled “Enjoy Four Seasons of Agriculture in the New Jersey Skylands.” This informative brochure includes the seven counties of Bergen, Hunterdon, Morris, Passaic, Somerset, Sussex and Warren,

and provides names, addresses, websites and telephone numbers of farms within the seven counties, and the types of activities (such as hayrides). The brochure also lists ancillary facilities for tourists to enjoy, such as camping, bed and breakfasts, and state parks and forests. The brochure is available at www.njskylands.com.

Agricultural Industry Retention, Expansion and Recruitment

By providing key strategies and techniques, the NJDA 2008 *“Economic Development Strategies”* endorses the expansion and strengthening of all areas of the agricultural industry as critical. (2008 *Economic Development Strategies*) There are many techniques to support the economic expansion, development, and solidification of Union Township’s agricultural industry. Certainly, diversity of agricultural commodities to broaden the agricultural base now dominated by corn and hay would help to ameliorate any economic downswing in either the general economy or a specific sector of the county’s agriculture industry. Some key items that the Union Township agriculture community can consider for economic development and sustainability are discussed below.

“Sell” agriculture as part of the Union Township “landscape”. There are 790 acres of preserved farmland in Union Township. As more Township farmland becomes preserved, and support for agriculture is woven into various sectors of the Township’s economy, farming will indeed become a permanent facet of life in Union Township, diminishing any perceived agriculture impermanence the general public may have. A coordinated effort to “sell” agriculture as a way of life that is enduring and significant to the Township and its economy will ensure area residents are aware of the many benefits of farmland, thus solidifying public economic support for agricultural industries. Signage on preserved farms and other outreach mechanisms, such as adult and youth farmer education, farm stands and pick-your-own operations and Community Supported Agriculture will work to enhance farming throughout the Township.

Supply products including farming equipment such as tractors and diskers, seeds, fertilizers, herbicides, fungicides, pesticides, etc. Large scale agriculture suppliers, which supply medium to large size agriculture operations, no longer exist near Union Township. The only suppliers in the area are several small, local suppliers. Without an adequate amount of suppliers within reasonable driving distances of farms, the business of farming can become so expensive and time consuming, so as to not be profitable. The county agricultural community can pursue options, which may include tax incentives, to entice suppliers to return to the area. As agriculture in Union Township becomes more “permanent” through increased preservation efforts, former suppliers who have left the area may return if they sense that a profitable supply business can be operated in the area.

Equipment and supply stores in the area include:

- Horsemen’s Outlet in Lebanon
- The Stable Stitchery in Pittstown
- D&R Equipment, Inc. in Ringoes

Farmers need to be adaptable to farm for, and supply, emerging markets in and out of the Township. Farms in Union Township have decreased in size during the last few decades. As an example of adaptability, the Township's larger farms grow hay and corn for livestock and equine industries in the area. In addition, smaller farms mean more opportunity to focus on specialized farm products for designated customers. As agriculture is indeed a business, farmers must continue to be adaptable to change with the needs and wants of its customer base. Recently, additional horticulture operations have sprung up in the Township. In addition, some farmers have also been switching from field crops to more mixed crops. Support from the Hunterdon County Agriculture Development Board, Board of Agriculture, N.J. Farm Bureau, and Community Supported Agriculture groups is a vital link to helping the agriculture community be adaptable, and stay profitable.

Market Research – Union Township should consider coordinating with Hunterdon County to partner with Rutgers University's Food Policy Institute, and the Rutgers Cooperative Extension of Hunterdon County to identify and integrate market research on agriculture and economic trends. The Food Policy Institute can be reached at (732) 932-1966.

Promote permanent markets – The agriculture community in Union Township can seek contracts with area schools and the Women's Correctional Facility to supply healthy, fresh farm products for use in their cafeterias. Area hospitals and senior/nursing homes are also possible customers. Since all of these are permanent institutions, once established these markets can be considered as "permanent customers" and revenue sources for the Union Township agriculture community.

An example of this is the "Fresh Fruit and Vegetable Program", sponsored by the U.S. Department of Agriculture. This is a program whereby participating school districts purchase locally grown produce for use in the school. Other criteria are accessibility of the produce to all students, and nutrition education. Union Township schools do not currently participate in this program.

Flexible regulatory programs with various agencies – The 2006 Agricultural Smart Growth Plan for New Jersey, prepared by the NJDA, identified flexibility in government regulation as an important component relative to farm viability. (2006 Agricultural Smart Growth Plan) The Union Township agricultural community can work with the New Jersey Department of Agriculture, and advocacy groups such as the New Jersey Farm Bureau and Hunterdon County Board of Agriculture, to ensure regulatory flexibility to the greatest extent possible. Examples where regulatory flexibility is important are the New Jersey Department of Environmental Protection's Freshwater Wetlands Protection Act Rules" (N.J.A.C. 7:7A-et. seq.), which grant exemptions for agricultural activities, and also the Flood Hazard Area Control Act Rules (N.J.A.C. 7:13). The latter was recently readopted, and includes numerous agricultural permits-by rule and general permits, which allow the continuation of agriculture activities in otherwise regulated areas.

Union Township should continue to incorporate agriculture into its economic development plans, municipal master plans, and local zoning - Incorporating agriculture into local planning and zoning documents will help the Township protect its farmlands and rural character in the face of development pressure. As an example of its support of local agriculture, Union Township passed a Right to Farm ordinance in 1987 to ensure farmers have the ability to practice accepted agricultural operations.

Cluster zoning is one method used by Union Township to help preserve farmland. This type of zoning involves concentrating residential development into small clusters, leaving large contiguous tracts of farmland open and undeveloped. According to the Union Township's *Master Plan*, this type of zoning would designate 20% of the area residential and the surrounding 80% permanent farmland. This has been successful in Union Township, but may not be viable in the future as there is a limited availability of large lots suitable for this type of development in Union Township.

Minimum wage impact on farm businesses – Generally, the production of vegetables and fruits (produce) requires the highest amount of hired farm labor, mainly at harvest time, to pick and process the vegetables and fruits. Other products that are prevalent in Union Township, such as hay and corn, require little or no hired farm labor (most labor is done by farm families). As such, farm labor costs are not as significant a problem for Union Township farmers as they are for farmers in other parts of the County or State, that have a major component of their farming industry in labor-intensive produce operations.

The Rutgers Cooperative Extension (RCE) of Hunterdon County and the Rutgers University Agricultural Experiment Station are vital to the long term economic sustainability of agriculture in Union Township, Hunterdon County, and the State of New Jersey. Farmer education programs keep the Hunterdon County agriculture industry apprised of the most recent farm research and techniques, which helps Hunterdon County farmers remain competitive. The Future Farmers of America (FFA) organization trains young people in agriculture practices, preparing them to be future Hunterdon County farmers. Both the RCE and FFA are discussed in detail in *Chapter 8*.

Location and emerging opportunities – Union Township is bisected east to west by the I-78 highway corridor. Union Township farmers should seek to derive as great an advantage as possible to access consumer markets located in New York, Pennsylvania, and northern New Jersey. Maximizing the use of these highways can increase the number and type of consumer markets to be reached by Union Township farmers. Located very close to the New Jersey-Pennsylvania border, Union Township is in a particularly good location for access to Pennsylvania markets.

Economic Development Programs

Union Township benefits from the economic development program provided by Hunterdon County to help the county's agricultural community stay strong and profitable. Locally, farmers benefit from the fertilizer plant located in Union Township. This plant is situated along a railroad line that formerly served Union Township as a retail outlet for

grain sales. Union Township is unique in that it is quite close to regional produce outlets in Philadelphia and New York City, and there are also smaller niche markets for produce in New Hope, Pennsylvania and Lambertville, New Jersey, both located within a 30 minute drive. The bulk of local farming that produces hay and produce is a direct retail business. Grain growers in Union Township predominantly ship products out of state to Lancaster, Pennsylvania via trailers. There are several retail nursery operations in Union Township and nursery stock is grown and sold locally. The infrastructure exists in Union Township to sustain the local farming community. Continued viability of the fertilizer plan and potential expansion of local markets would greatly enhance local agricultural operations. The AAC would act as a liaison for agricultural businesses looking to relocate to Union Township and support the restoration of existing infrastructure for farming operations.

The following is a listing and brief discussion:

Farm Markets- Union Township is home to several farm markets, including Peaceful Valley Orchards, located on Pittstown Road. Since 2001, Peaceful Valley Orchards has offered fresh, locally grown produce and baked goods to Union Township residents. In addition to the farm store, there is also a pick-your-own operation open for pumpkin picking in the fall. Peaceful Valley Orchards is unique among Union Township's farm markets because it is part of the Northwest Jersey Buy Fresh Buy Local program.

The Northwest Jersey "Buy Fresh, Buy Local" Campaign is an extension of the Foodshed Alliance, "*a grassroots, non-profit devoted to promoting profitable, sustainable farming and locally-grown, fresh, healthy food in northwestern New Jersey*" (www.foodshedalliance.org). This campaign is an effort by the Foodshed Alliance, local farmers, and community leaders to build connections between farmers and consumers through food guides, food and farming events, and community outreach, and therefore encourage local residents to buy fresh, local produce. (*Buy Fresh, Buy Local*)⁷ While Hunterdon County is not typically part of the area where the Foodshed Alliance works, there are farms in Union Township that are part of the "Buy Fresh, Buy Local" program.

The following is a list of farm stands and markets located in close proximity to Union Township:

Farm	Address	Phone	Available
Al's Tree Farm	991 Croton Road, Pittstown, NJ	(908) 782-4283	Timothy Hay, Orchard Grass, Evergreen, Pine, Spruce, Screened top-soil, shredded mulch, firewood, miniature horses
Beckage Farms	78 Whitehall Road, Pittstown, NJ	(908) 229-7248	Fruit and vegetables, eggs, honey, poultry, and game
High View Farm	2 Dutch Hill Road, Hampton, NJ	(908) 537-4758	Vegetables, sweet corn, mustard greens
New Horizon Plant Farm	555 Charlestown Road, Hampton, NJ	(908) 735-7737	Herbs, vegetables, ground cover, bedding and flowering plants
Peaceful Valley Orchards	150 Pittstown Road, Pittstown, NJ	(908) 730-7748	Fresh fruits and vegetables, flowers, preserves, apple cider, pies, breads, cookies, pork, and cheese. Pick your own strawberries, apples, pumpkins, and flowers

Community Supported Agriculture – Economic support of the Union Township agricultural community can also come from local grassroots groups through programs such as Community Supported Agriculture (CSA). Community Supported Agriculture can best be described as a community of individuals who pledge support to a farm operation so that the farmland becomes the community’s farm. In such an arrangement, the growers and consumers provide mutual support, and share the risks and benefits of agriculture. CSA often focuses on high quality foods, especially those produce using organic or biodynamic farming and generally consists of:

- Members or “share-holders” of the farm pledge in advance to cover the anticipated costs of the farm operation and farmer’s salary.
 - Members receive shares in the farm’s products throughout the growing season.
 - Members also receive the satisfaction gained from reconnecting to the land and participating directly in food production.
 - Members also share in the risks of farming, including poor harvests due to unfavorable weather or pests.
 - Generally, growers receive better prices for their crops, gain some financial security, and are relieved of much of the burden of marketing.
- (National Agricultural Library)*⁸

At the moment, there are no Community Supported Agriculture Farms in Union Township. Future participation in Community Supported Agriculture could greatly reinforce Union Township’s agricultural roots and strengthen the future of the industry within the Township.

Additional Resources

There are numerous other resources which can be used by the Union Township agriculture industry to assist it in expanding and solidifying its economic base in the county and region. Several are listed below.

The New Jersey Department of Agriculture lists various informational Agriculture Economic Development Services on its website. These include:

- Agriculture credit and finance;
 - Business development for agriculture, food manufacturing and related industries;
 - Farm building construction;
 - Farmland assessment;
 - Motor vehicle regulations for agriculture;
 - Real property appraisal manual, farm building section;
 - Recycling for agriculture;
 - Risk management and crop insurance;
 - Sales and use tax on farmer’s purchases; and,
 - Trespass, vandalism, and liability on farms.
- (Agricultural Development Services)*⁹

Sustainable Agriculture Research and Education (SARE) is a “United States Department of Agriculture competitive grants program with regional programs and regional leadership. SARE supports research and education that help build the future economic viability of agriculture in the United States. SARE funding is authorized under Subtitle B of Title XVI of the Food, Agriculture, Conservation and Trade Act (FACTA) of 1990.” (SARE)¹⁰ SARE funds are used for:

- *Farmer/Grower Grants*: These grants have the goal of helping farmers shift to practices that are environmentally sound, profitable, and beneficial to the wider farm community.
- *Partnership Grants*: These grants are for RCE and NRCS personnel, non-profits, and agricultural consultants who work directly with farmers. Grants are used for on-farm research and demonstration projects that address sustainability.
- *Professional Development Grants*: These grants fund professional development projects that help RCE educators and other agricultural professionals learn and transmit the knowledge needed to help farmers move toward greater sustainability.
- *Research and Education Grants*: These grants fund research and education projects that lead to farmers adopting sustainable practices. The emphasis is on improved farming practices and an enhanced quality of life for farmers.

(SARE)

As defined in FACTA of 1990, sustainable agriculture is an integrated system of plant and animal production practices having a site-specific application that will, over the long term:

- Satisfy human food and fiber needs;
- Enhance environmental quality and the natural resource base upon which the agricultural economy depends;
- Make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls;
- Sustain the economic viability of farm operations; and,
- Enhance the quality of life for farmers and society as a whole.

(SARE)

The Agricultural Marketing Resource Center (AgMRC) brings together agriculture experts from Iowa State University, Kansas State University and the University of California “... to create and present information about value-added agriculture. The center draws on the abilities, skills and knowledge of leading economists, business strategists and outreach specialists to provide reliability in value-added agriculture”. AgMRC provides information to help farmers “assess value-added market opportunities, investigate processing options and understand business and production issues” for such agricultural commodities and products as Agritourism, renewable energy, livestock, specialty crops, and numerous others. In general, the goals of AgMRC are to:

- Create an electronic, Web-based library with powerful search capabilities to make value-added market, economic and business information and other resources available to producers. It can be accessed at <http://www.agmrc.org>.

- Provide value-added business and economic analysis tools, including information on business principles, legal, financial and logistical issues.
- Conduct research and analysis on economic issues facing producers involved in value-added business ventures.
- Link producers with electronically available information and resources.
(*Agricultural Marketing Resource Center*)¹¹

The AgMRC website offers numerous business development information links, as well as links to other government and non-government sources for business development. This website can be used by the Union Township agricultural community as a resource as they consider the development and implementation of value-added products.

Future of Agriculture

The farmers of Union Township utilize a variety of technical assistance tools for their day to day operations, including crop consultants and staff from the Hunterdon County Soil Conservation. The Natural Resource and Conservation Service as well as the Farm Service Agency both provide support to local farmers. One recommendation from the local farming community includes the establishment of a more streamlined bid process for obtaining leases to farm State lands, including the ability to secure longer term leases on State lands.

The future of agriculture in Union Township is being shaped by market forces and social trends that are occurring throughout New Jersey. These trends have already begun to redefine the traditional agricultural industry in Union Township. One notable trend shaping agriculture in the County has been the extended decline in the dairy industry. Dairy was once a substantial part of the region's agricultural economy, and its continued decline impacts dairy farmers and their support businesses as they transition towards other forms of agriculture. Fortunately, Hunterdon County has always supported a diverse array of agricultural industries and has the ability to shift its focus towards other, more profitable areas of agriculture, such as nursery and greenhouse or hay production.

Another challenge facing the area's farmers is increasing land prices and property taxes. This trend indicates that farmers will show a greater preference for renting rather than owning land, and that farm operations will take up less space and utilize more intensive practices on their land. Increasing land prices also threaten to replace many of Union Township's and Hunterdon County's farmlands and open space areas with residential and commercial developments that are less compatible with agricultural production.

The combination of traditional agricultural markets declining, and land costs increasing, will likely promote innovation in the ways farmers supplement their incomes. Farmers are currently trying to meet these challenges by producing goods with higher rates of return, such as nursery goods and sod, farm stand merchandise, and equine services. Agritourism facilities, such as farm stands and pick-your-owns, may become more numerous as the County's residential population grows, expanding the market for these types of services.

Returns from “direct” sales of agricultural products to consumers have increased in recent years. This indicates that the anticipated trends towards more innovative farming practices have already begun to influence agriculture in Hunterdon County. Direct agricultural sales generated \$36 million on 1,313 Hunterdon County farms in 1997 – a figure which, despite unfavorable (drought) growing conditions, grew to \$42 million on 1,514 farms in 2002. (*2002 Census of Agriculture*) Niche products such as packaged and organic goods that generate “value added” revenue streams are likely to increase as well.

In discussions with the Agricultural Advisory Committee and the public at the November 5, 2008 public meeting for the Draft Plan, as well as a October 15, 2008 Union Township farm tour by The Land Conservancy of New Jersey staff, the following were indicated to be of special concern for the Union Township agricultural community relative to long term agriculture operations:

- Preventing further subdivision of farms is a concern. Over the years, farms within the Township have become smaller and smaller. The AAC would like to focus on preserving farmland that is most vulnerable to subdivision;
- Due to strict development limits, the Highlands Water Planning and Protection Act, and ensuing Regional Master Plan, have greatly decreased land values in the Preservation Area of the Highlands;
- Union Township’s Green Acres funding is tied up in paying off debt for the purchase of the Milligan Property. The AAC hopes that participation in the Farmland Preservation Program will enable them to continue to preserve large amounts of farmland within the Township, helping to maintain its agricultural roots.
- Maintaining rural character is a priority, and the Township has been very active in preserving large tracts of farmland and open space. The Township would like to use preserved farmland to connect already existing preserved open space and Green Acres properties; and
- Pittstown Trails, an equine trails association, is very active within Union Township. If possible, the AAC would like to incorporate trail easements into the deed restrictions for preserved farms.

¹ Comprehensive Master Plan and Background Analysis Report for Union Township, Hunterdon County, NJ, 1984 amended 1999.

² New Jersey Department of Agriculture. Agricultural Smart Growth Tool Kit “Planning for Agriculture”. <http://www.state.nj.us/agriculture/toolkit.htm>. Accessed October 2008.

³ New Jersey Department of Agriculture, 2006 Agricultural Smart Growth Plan. <http://www.state.nj.us/agriculture/pdf/smartgrowthplan.pdf>. Accessed October 2008.

⁴ New Jersey Department of Agriculture, 2008 Economic Development Strategies.

⁵ New Jersey Department of Agriculture, State Agriculture Development Committee. New Jersey Farmland Assessment data. 2006. Hunterdon County – Union Township

⁶ New Jersey Department of Agriculture, Jersey Fresh Program. <http://www.state.nj.us/jerseyfresh/>. Accessed November 2008

⁷ Buy Fresh, Buy Local. <http://www.buyfreshnwj.org/WebPages/OurCampaign.htm>. Accessed October 2008.

⁸ United States Department of Agriculture, National Agricultural Library, Alternative Farming Systems Information Center, Community Supported Agriculture. <http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml>.

⁹ New Jersey Department of Agriculture, Agricultural Development Services. <http://www.state.nj.us/agriculture/divisions/md/prog/agricultureeconomic.html#top>. Accessed July 2007.

¹⁰ New Jersey Department of Agriculture, Sustainable Agriculture Research and Education (SARE). <http://www.state.nj.us/agriculture/grants/sare.html>. Accessed May 2007.

¹¹ Agricultural Marketing Resource Center, Mission and Goals. <http://www.agmrc.org/agmrc/About+mission++goals.htm>. Accessed May 2007.

CHAPTER 7: NATURAL RESOURCE CONSERVATION



Preservation of farmland is the cornerstone of the New Jersey Department of Agriculture (NJDA)'s *Agricultural Smart Growth Plan* and the Farmland Preservation Program. However, there is more to farmland preservation than retirement of development rights or outright purchase of farms. One of the cornerstones to a successful, long-term farmland preservation program is the conservation of natural resources on farms, without which the sustainability and viability of New Jersey's preserved farmland would be in doubt.

Natural Resource Protection Agencies

There are numerous entities, both public and private, which administer, fund, and provide technical guidance for Union Township farmers relative to natural resource conservation. These entities are in place to assist farmers with natural resource conservation issues, and should be called upon by farmers for appropriate assistance.

Natural Resource Conservation Service

An important partner in support of natural resource conservation for the agricultural community is the United States Department of Agriculture (USDA)'s Natural Resources Conservation Service (NRCS). The NRCS "*provides assistance to private land owners (including farmers) in the conservation and management of their soil, water, and other natural resources.*" The NRCS provides technical assistance suited to the natural resource issues that are specific to a farmer's needs, with ample opportunity for cost shares and financial incentives. (*Information for Farmers*)¹

The local NRCS office serving Union Township is located at 687 Pittstown Road in Frenchtown. Union Township farmers may utilize this local NRCS office for assistance. NRCS will also reach out directly to landowners if they know of a farmer who is in need of technical assistance, or could use the guidance of the NRCS staff.

The local NRCS office helps to prepare Conservation Plans for farmers. These Conservation Plans nearly always include strategies to conserve soil and water, but may also include conservation practices for flora, fauna and clean air. If all five elements are included, they are referred to as Resource Management Plans. (*Kent Hardmeyer and/or Ron Phelps*)² Within one year of selling their development easement, owners of preserved farms are required to enter into a Conservation Plan. The Plans are also

required to apply for natural resource conservation program grants such as the Wildlife Habitat Incentive Program (WHIP) and Environmental Quality Incentive Program (EQIP). The local NRCS office administers these conservation program grants, which offer financial incentives to support conservation projects. (*Ken Bingham*)³

The following strategies would strengthen natural resource conservation efforts for farms in Hunterdon County and its municipalities, including Union Township:

- As previously stated, owners of preserved farms are required to enter into a Conservation Plan within one year of selling their development easement. However, implementation of this requirement is inconsistent. Providing a mechanism and staff to ensure that Conservation Plans are prepared and implemented will guarantee that the objectives of the program are put in place, and active stewardship practices are underway.
- Owners of preserved farms have an obligation to conserve natural resources on their farms. Implementation of a Conservation Plan is a good first step towards fulfilling this obligation.

(*Kent Hardmeyer and/or Ron Phelps*)

The phone number for the local NRCS office is (908)782-4614, and the District Conservationist is Gail Bartok. She can also be reached at gail.bartok@nj.usda.gov (NRCS, New Jersey)⁴ and her staff (listed below) can be contacted by Union Township farmers for assistance or for more information on the availability of NRCS programs in the Township.

- MacKenzie Hall – Private Lands Biologist
- Evan Madlinger – Soil Conservationist
- Susanne M. Ohl – Soil Conservation Technician
- Jill Ott – Natural Resource Specialist- Grazing Lands
- Bea, Sabouathone – Soil Conservationist
- Shirley Sakos – Program Assistant

An additional resource available from NRCS is the “Field Office Technical Guide.” It contains information about the development and implementation of soil, water, air, flora, and fauna resource conservation practices, and is used to develop Conservation Plans. Conservation practices discussed in the Guide that are pertinent for Union Township include:

- Irrigation water management;
- Forage harvest management;
- Crop rotation;
- Nutrient management, including manure and fertilizers.

Hunterdon County Soil Conservation District

Another partner in the conservation of agricultural resources is the New Jersey Department of Agriculture, Division of Agricultural and Natural Resources. Among its responsibilities, the Division implements the natural resource conservation programs, administered by the State Soil Conservation Committee (SSCC). These programs

*“provide engineering services and regulatory guidance to soil conservation districts, homeowners, engineers, planners, and virtually all development activities. The Division provides technical standards applicable to construction and mining sites regulated by the Soil Erosion and Sediment Control Act program ...” (Agricultural and Natural Resources)*⁵

The SSCC coordinates and supports the work of the state’s 15 local soil conservation districts (SCD), one of which is the Hunterdon County SCD. The Hunterdon County SCD is charged with reviewing and approving natural resource conservation and assistance program grants, implementing agricultural conservation planning assistance, agricultural conservation cost-sharing program grants, application of organic materials on agricultural land, agricultural water supply and management, soil erosion and sediment control, storm water discharge authorization, and soil surveys. *(Agricultural and Natural Resources)*

The Hunterdon County SCD office is located in Frenchtown. Union Township farmers may approach this local SCD office with a Request for Assistance (RFA) to apply for funds from natural resource conservation grant programs such as WHIP and EQIP. If approved, the RFA is forwarded to the local NRCS office in Frenchtown for processing. The administration of the RFA includes preparation of a Conservation Plan and grant program contract, as previously described. The Hunterdon County SCD is involved in review of conservation plans and grant program contracts, and must give final approval to both. *(Kent Hardmeyer and/or Ron Phelps)* In Hunterdon County the County is responsible for the monitoring of preserved farmland preserved by the County or through the Municipal PIG program (as long as Hunterdon County was a funding partner). The Hunterdon Soil Conservation District currently performs this service for the County, but the County is ultimately responsible monitoring preserved farms. *(Hunterdon County Farmland Preservation Plan)*⁶

The phone number for the Hunterdon County SCD office is (908)788-1397, and the District Representative is Christopher Testa. He can be contacted by Union Township farmers for assistance.

Rutgers Cooperative Extension of Hunterdon County

The Rutgers Cooperative Extension (RCE) of Hunterdon County provides both field and technical research focused on best management practices for farmers to ensure the long term viability of both the agricultural economy and the natural resources upon which it is based.

The RCE of Hunterdon County is located at the Extension Center, 6 Gauntt Place, Building 2 in Flemington. Extension agents include Win Cowgill and Robert Mickel. *(Rutgers Cooperative Extension Hunterdon County)*⁷ They may be contacted with any questions or for information on education programs or services. Mr. Cowgill can be contacted via e-mail at cowgill@njaes.rutgers.edu and Mr. Mickel at mickel@njaes.rutgers.edu. Both can be contacted via phone at (908) 788-1339.

New Jersey Department of Environmental Protection

The New Jersey Department of Environmental Protection (NJDEP)'s Division of Parks and Forestry oversees the "Private Lands Management Program". The aim of this program is to foster wise stewardship and management of the state's 270,000 acres of private woodlands currently under farmland assessment. (*Division of Parks and Forestry*)⁸ Some properties in Union Township that are farmland assessed include extensive woodland tracts. Such tracts were added as "farm products" in the 1970's. These woodland tracts, which must be utilized by the farmer as a sustainable "product", require Woodland Management Plans (WMPs) to receive reduced local property taxes accorded properties in the farmland tax assessment program. (*Jim Barresi*)⁹

The NJDEP's Division of Parks and Forestry, Bureau of Forest Management (BFM), reviews applications for WMPs, which are prepared for farmers by private consultants. Once a WMP is in place, a "Woodland Data Form" must be submitted yearly to certify that the WMP is being complied with. However, the NJDEP, BFM, also inspects each site once every three years to verify compliance with WMP conditions. (*Jim Barresi*) Since reduced local property taxes are often critical in keeping active agricultural lands economically viable, the NJDEP is an important partner for Union Township's farmland preservation efforts.

Non-appurtenant woodlands are woodland acreage on a farm over and above total farmed acreage (tilled and pasture). For example, if 50 acres of a farm are tilled or pastured, and there are 125 acres of woodlands on the farm, 75 acres of woodlands would be non-appurtenant (125 woodland acres minus 50 farmed acres). Non-appurtenant woodlands require a WMP. In Union Township for 2006, there were 779 acres of non-appurtenant (or unattached) woodland acres in farmland assessment, a decrease from 2000 when there were 978 acres. In 1990 there were 650 non-appurtenant acres in farmland assessment in Union Township. (*2005 NJDA Farmland Assessment*)¹⁰

Appurtenant woodlands are woodland acreage on a farm, less than or equal to, farmed acreage. So, in the preceding example, 50 of the 125 woodland acres would be appurtenant. Appurtenant woodland acres do not require a WMP. (*Jim Barresi*) (*2005 NJDA Farmland Assessment*) In Union Township for 2006 there were 537 acres of appurtenant (or attached) woodland acres in farmland assessment, down from 2000 when there were 685 acres. In 1990 there were 1,011 appurtenant acres in farmland assessment in Union Township. (*2005 NJDA Farmland Assessment*)

The New Jersey Department of Environmental Protection's Nongame and Endangered Species Program also administers the Landowner Incentive Program (LIP). LIP works to improve, manage, and protect habitat for threatened and endangered species on private lands, some of which are agricultural lands. Project durations must be for a minimum of five years, and the property owner contributes a minimum 25% cost share. Some grain farmers have expressed concern over the use of LIP. This is because it not only provides

habitat for threatened and endangered species, but also for such nuisance wildlife as deer and turkey, which are known to cause severe loss to farm products, including corn.

USDA, Forest Service's Forest Stewardship Program

The United States Forest Service sponsors the Forest Stewardship Program. This program supports landowners whose property has a woodland management plan that recognizes and manages the wetlands, wildlife, aesthetics, soil, and water in addition to the commercial woodlands on the property. This program, when fully funded, offers landowners cost-share initiatives to allow the landowners to fully follow the guidelines in their woodland management plan. In New Jersey, the state farmland tax program and the U.S. Forest Service program have merged to allow one planning document for the landowner where the stewardship plan meets the state tax code and eliminates conflicts between the two. Increasing enrollment of landowners in this merged state-federal program will ensure increased protection of the natural resources for an extended period. The minimum is a ten-year management plan. This does not ensure preservation of the land in perpetuity, but it does allow recognition of the importance of the land value and stewardship of the property for a longer period of time.

North Jersey Resource Conservation and Development Council

The North Jersey Resource Conservation and Development (RC&D) Council's main mission is to "facilitate the wise use and protection of the region's human and natural resources (which includes farmland). This is accomplished by working with communities and regional partnerships to address issues related to water quality and water resource protection, sustainable farming and farm communities, building local community capacity, and managing natural hazards that impact community planning". Each RC&D area usually consists of several counties, and has a council composed of local citizens who serve on a voluntary basis, as well as government representatives. (*North Jersey RC&D Council*)¹¹

Under the leadership of NRCS, the North Jersey RC&D Council receives technical assistance and may be able to qualify for financial assistance of up to 25% of needed funds, or a maximum of \$50,000, from the U.S. Department of Agriculture. (*North Jersey RC&D Council*)

The North Jersey RC&D Council includes the counties of Hunterdon, Morris, Somerset, Sussex, Union and Warren. The office is located at 54 Old Highway 22, Suite 201, in Clinton, Hunterdon County, and the phone number is (908) 735-0733. Union Township farmers can contact the North Jersey RC&D Council for assistance with issues related to natural resource conservation and sustainable farming.

Private non-profit groups and private citizens

Agriculture needs not only the broad support of state, county, and local governments to help preserve agriculture resources, but also the help of private non-profit groups and

citizens. Indeed, without their support, government programs and support for agriculture would fall short of what is needed to protect the natural resource base of the agricultural landscape. These groups and citizens spend countless hours providing and sharing their expertise, as well as raising and contributing money. They are invaluable in assisting with all phases of farmland preservation for Union Township, including natural resource conservation and stewardship.

Resource Protection Programs and Funding

2002 and 2008 Farm Bills

The Farm Security and Rural Investment Act of 2002 (2002 Farm Bill) was landmark legislation, with much of its focus on conservation funding and environmental issues. Conservation provisions were designed to assist farmers in being good stewards of the land through grants and technical assistance. Voluntary programs relevant to New Jersey, and Hunterdon County, included the Conservation Reserve Enhancement Program (CREP), Conservation Innovation Grant Program (CIG), Environmental Quality Incentives Program (EQIP), Farm and Ranch Land Protection Program (FRPP), Grassland Reserve Program (GRP), Wetlands Reserve Program (WRP), and Wildlife Habitat Incentives Program (WHIP). (*Conservation Programs*)¹² These programs are continued under the May 2008 Farm Bill (Conservation, Food and Energy Act of 2008). However, statutory language changes mean new program rules need to be written by the U.S. Department of Agriculture. These rule changes may impact how New Jersey implements some its programs. Once the new rules are approved for use, and prior to any 2009 funding decisions, all applicants will have ample opportunity to review the rule changes and contract terms, and will be required to comply with all applicable rules and requirements in place at the time of contract obligation. (*NRCS*)¹³ As in the past, the programs will be administered by the local NRCS office in Frenchtown, and the Hunterdon County Soil Conservation District, as discussed in this section.

The Mid-Atlantic region, of which New Jersey is part, is generally underserved by federal farm programs. The Northeast/Mid-Atlantic region receives on average less than two cents in commodity payments for every dollar in farm sales, in stark contrast to over fifteen cents in some Midwest and Western states. With smaller than average farms, lower profit margins, varied crops, and development pressure, New Jersey has unique farm and food policy needs, which do not match other, larger agricultural states who receive the bulk of commodity payments. (*American Farmland Trust*)¹⁴ The 2008 Farm Bill creates the new “Average Crop Revenue Election” program. This is a revenue guarantee program based on “five-year state average yield and the two-year national average price”. The program is voluntary, but participants would receive payments when their revenue falls below established levels. (*Farm Bureau Update newsletter*)¹⁵ Such a revenue support system may well have a positive effect for Hunterdon County Farmers, since it would help specialty crops and niche markets receive their fair share of payment support. (*Jim Baird*)¹⁶

Some of the most significant gains in the 2008 Farm Bill were made in the area of conservation. New funding increased by over \$4 billion, which should translate into increased stewardship practices, and a healthier environment via cleaner water, reduced erosion and enhanced wildlife habitat. However, many of the programs require annual appropriations from Congress, which often can mean a shortfall in full implementation of these critical conservation programs. Some highlights of the 2008 Farm Bill include:

- Improvement of the Farm and Ranch Lands Protection Program (FRPP) to allow for greater flexibility at the local level. Nationally, authorized funding rises from \$97 million to \$200 million a year by 2012.
- Expansion of the Environmental Quality Incentives Program (EQIP) to allow for innovative approaches that generate public benefits such as water and soil quality improvements, renewable energy production, and wildlife and open space protection. Nationally, authorized funding rises from \$1.2 billion to \$1.75 billion in 2012.
- Establishment of a conservation loan guarantee program to help producers secure low interest loans in order to implement often costly conservation and environmental practices.
- Creation of a cooperative conservation initiative as a way for producers and community groups to work together on common natural resource concerns.
- Greater flexibility with third party technical assistance providers to identify and implement the most effective conservation practices appropriate for the land.
- Continuation of the Wetlands Reserve Program (WRP) and the Grassland Reserve Program (GRP) to protect water resources and expand wildlife habitat.
(*American Farmland Trust website*)¹⁷

The following is a synopsis of the natural resource conservation programs to be funded by the 2008 Farm Bill. They will be implemented by NRCS and the Hunterdon County SCD, and also to a minor degree the Farm Service Agency, which is also part of USDA. These programs are the backbone of natural resource conservation efforts in Hunterdon County and its municipalities, including Union Township.

Conservation Reserve Enhancement Program (CREP) and Conservation Reserve Program (CRP)

Through CREP and CRP, agricultural producers voluntarily retire land to protect environmentally sensitive areas, decrease soil erosion, provide and restore wildlife habitat, and protect ground and surface water. (*NRCS Conservation Programs*)¹⁸ Examples of conservation practices include riparian buffers and filter strips for water quality, and contour buffer strips to reduce soil erosion. With incentive payments for farmers to fully implement a CREP contract, payment for this program may be fully funded by NRCS and NJDA. (*Ken Bingham*) Statewide, CREP was most recently funded with \$100 million for the 2004 to 2007 timeframe. It is used mostly along streams and rivers, to protect water resources. (*Kent Hardmeyer and/or Ron Phelps*)

Conservation Innovation Grant program (CIG)

The aim of the CIG program is to stimulate the development and adoption of conservation approaches and technologies which are innovative, in conjunction with agricultural production. Funds are awarded as competitive 50-50 match grants to non-governmental organizations, tribes, or individuals. *(NRCS Conservation Programs)* CIG is a component of EQIP, and its grants are generally funded through EQIP (see below). *(Kent Hardmeyer and/or Ron Phelps)*

Environmental Quality Incentive Program (EQIP)

EQIP is a conservation program in which farmers receive financial and technical assistance with structural and management conservation practices that address soil, water, and grazing land concerns. *(NRCS Conservation Programs)*.

Farm and Ranch Land Protection Program (FRPP)

FRPP provides up to 50% matching funds to purchase development rights and conservation easements to keep farm and rangeland in agricultural use. The USDA partners with state, tribal, or local governments, and non-governmental organizations. *(NRCS Conservation Programs)* Farmers accepting funds through this program must adhere to strict impervious surface limitations. In New Jersey, this program receives approximately \$500,000 to \$1 million annually, most of which goes to the State Agriculture Development Committee or private conservation groups. *(Kent Hardmeyer and/or Ron Phelps)*

Wetlands Reserve Program (WRP)

WRP offers farmers payments for restoring and protecting wetlands on their property that had been previously drained for agricultural use. Wetlands help reduce flooding, filter pollutants from water, provide critical wildlife habitat, and protect open space. *(NRCS Conservation Programs)* Payment by NRCS is based upon appraised agricultural land value. With appraised values from \$100 to \$2,000 per acre, many farmers are not willing to create wetlands on otherwise productive agricultural lands.

Wildlife Habitat Incentives Program (WHIP)

WHIP provides technical and financial assistance for creating, enhancing and maintaining wildlife habitat. *(NRCS Conservation Programs)* The State Technical Committee for WHIP in New Jersey awards project contracts for designated wildlife habitat categories such as migratory and declining wildlife species, and pollinators that benefit agriculture. Since its inception in 1998, WHIP has been a popular program for non-federal landowners interested in wildlife habitat management in New Jersey.

SADC Soil and Water Conservation Grants

The New Jersey Department of Agriculture, State Agriculture Development Committee (SADC) has in the past provided grants to farms that are permanently preserved, or are enrolled in the eight year preservation program, with priority for preserved farms. (*Dave Schaaf*)¹⁹ Cost share grant funding for fiscal year 2008 has been approved. The purpose of the grants and program is to provide funding for soil and water conservation practices.

The types of soil and water conservation projects funded by SADC include soil erosion and sediment control systems (terrace systems), control of farmland pollution (stream protection; sediment retention, erosion or water control systems; animal waste control facilities; and agri-chemical handling facilities), the impoundment, storage and management of water for agricultural purposes (diversions; water impoundment reservoirs; irrigation systems; and, drainage systems), and management of land to achieve maximum agricultural productivity (land shaping or grading). (*Soil and Water Conservation Grants*)²⁰

These grants fund soil and water conservation projects approved by the Hunterdon County Soil Conservation District (District). Both the District and the local NRCS office also provide technical assistance for eight year program projects. Once the District deems the conservation project necessary and feasible, applications are forwarded to the N.J. State Soil Conservation Committee, which recommends projects to the SADC for funding approvals. (*Soil and Water Conservation Grants*) Traditionally 50% of the costs of approved soil and water conservation projects are paid with grant funds, but up to 75% have also been approved in the past. (*Dave Schaaf*)

Local farmers take advantage of the NRCS programs, as appropriate, when the programs are funded and available to them.

River Friendly Certification Program – North Jersey RC&D

The River Friendly Farm Certification Program was developed to address water quality concerns within the Raritan River Basin. Many of the streams within the watershed have been assessed as impaired for phosphorus, which can be attributed to poor management within agricultural areas. The River Friendly Farm Certification Program promotes agricultural best management practices through recognition of those farms that, through good management, help to protect water resources within the watershed. Conservation planning assistance is offered to those farms that do not meet the certifying criteria, but would like to install or adapt the necessary components to become certified as River-Friendly (www.northjerseyrcd.org). Becoming a River Friendly Farm provides public recognition for implementing and maintaining best management stewardship practices and:

- Creates an avenue for increased marketing strategies with River Friendly Farm label
- Improves water quality in streams while maintaining productive farmland
- Promotes more efficient use of fertilizers and pesticides
- Provides a healthier soil structure

Water Resources

The Importance of the Water Resource

The protection of the water resource as it relates to agriculture and farmland preservation in Union Township cannot be overstated. Quite simply, without a consistent, plentiful, adequate and clean water source, agriculture cannot exist. In addition, farms are critical as open space areas to provide aquifer water recharge. To a certain extent, some aspects of ensuring clean and plentiful water can be controlled at the individual farm level. These include:

- Minimizing the use of synthetic chemicals such as fertilizers, herbicides, pesticides, and fungicides so as to lessen impacts to groundwater;
- Providing riparian buffers along watercourses, so as to protect streams from the aforementioned synthetic chemicals;
- When possible, practicing organic farming methods;
- Practicing appropriate timing of chemical application, so as to minimize its use; and,
- Practicing water conservation techniques, such as drip irrigation and water reuse for certain types of farming where feasible, such as smaller scale vegetable and fruit operations.

The *State Development and Redevelopment Plan* also discusses the importance of the water resource. The Plan indicates that Union Township's farmland is found in areas mapped as Rural Environmentally Sensitive Planning Area or Environmentally Sensitive Planning Area. The Plan's goals include support for maintenance and improvement of the agricultural industry's economic viability.

Agricultural goals in Rural Environmentally Sensitive Planning Areas and Environmentally Sensitive Planning Areas include, "... *guiding development away from agriculture, minimizing conflict between agriculture and Centers, ensuring adequate water supply, protecting large tracts of land, and promoting more intensive, new-crop agriculture.*" (*New Jersey State Development and Redevelopment Plan*)

Finally, emphasis is also given to the importance of the water resource, via the New Jersey Department of Agriculture which "... *is working with Rutgers Cooperative Extension, the Natural Resources Conservation Services, the United States Geological Survey, the New Jersey Department of Environmental Protection and the farm community to assess the water needs of agriculture and to assist in the development of essential rules, policies and guidelines to ensure an adequate water supply to meet the current and future needs of the agricultural industry.*" (*2006 Agricultural Smart Growth Plan*)²¹

Water Supply Characteristics

The Spruce Run Reservoir is a prominent physical feature of Hunterdon County. As a whole, the Spruce Run area (reservoir and open space) occupies nearly a quarter of Union

Township. Because it encompasses such a large portion of the Township, one would assume the town's residents depend heavily on Spruce Run for their water supply. While the water from Spruce Run supplies many other municipalities in New Jersey, Union Township residents rely on groundwater to fulfill their water needs, including water required for agriculture. (*Union Township Open Space Plan*)²²

Even though Union Township residents do not get their water from Spruce Run, the reservoir plays a big role in the Township due to its size and location. Spruce Run Reservoir is a Category 1 body of water, meaning it is protected by New Jersey antidegradation policies. These policies help to ensure good water quality for important bodies of water. (*Natural Resources Inventory*)²³ The quality of these waters is of vital importance and if for some reason it is impaired, the State mandates that efforts must be made to repair the body of water back to its original conditions. (*Natural Resources Inventory*) Therefore, effort needs to be made to prevent activities that may degrade water quality from occurring in areas in close proximity to the reservoir. The State's efforts to minimize impact on the reservoir are made evident through the amount of NJDEP preserved open space occupying the vast majority of Union Township north of I-78.

Water Conservation Strategies

An adequate water supply is important to successful agriculture operations in Hunterdon County. Droughts in recent years have highlighted the precarious nature of the agriculture (and general) water supply, and the need for water conservation systems and regimens. (*See Chapter 1, Page 1-6, for an in-depth presentation of the importance of water resources in the Highlands region of the State and in Union Township, specifically*).

The New Jersey Department of Agriculture, through its Agricultural Smart Growth Plan, encourages farmers to “... work to accelerate the use of efficient water conservation technologies, such as drip irrigation. Identify and promote new and efficient methods to conduct water distribution on farms, utilizing farm ponds and water reuse options.” (*2006 Agricultural Smart Growth Plan*)

The dominant field crop in Union Township is hay, which is used primarily for feed on horse farms in the Township. Hay relies on rain and some groundwater for water needs, and as such water conservation strategies per se are difficult to implement. With nursery and greenhouse, sod, and vegetable farming, it is possible to implement conservation strategies such as drip irrigation, or watering crops in the cooler parts of the day so as to minimize evaporation. Water re-use is another possible option. For livestock, floats and timers in watering troughs can conserve water by negating the need for constantly running water to keep troughs full. Union Township farmers should implement water conservation strategies whenever feasible, and include such in Conservation Plans whenever practicable.

Waste Management Planning

Waste Management in Union Township

Management of livestock waste has important implications for the quality of ground and surface waters. Unchecked, or poorly managed, these wastes can cause serious water quality problems by the introduction of unwanted microorganisms into natural systems. This is particularly important in Union Township as so many New Jersey residents rely on drinking water that comes from Spruce Run. Poor management of animal waste can also cause disease among farm animals. Proper animal waste management is not only required, but is environmentally responsible, as is recycling of farm by-products whenever feasible. Currently the Township follows State standards in regards to managing animal waste.

Union Township looks to the NJDEP and NJDA for rules and guidelines concerning waste management, in particular animal waste. The Soil Conservation District can provide technical assistance to the Township with regards to animal waste management. In addition, the County is available to provide recycling programs and aid in proper disposal of waste items. The County's *Wastewater Management Plan* is currently being completed, and should be finalized by the upcoming May 31, 2010 deadline. The NJDEP granted two extensions for this project due to the complexities of the work involved and the breadth of information being compiled.²⁴

Concentrated Animal Feeding Operations & Animal Feed Operations

Concentrated Animal Feeding Operations (CAFO) are defined at N.J.A.C. 7:14A-2.13 (New Jersey Pollutant Discharge Elimination System (NJPDES)) as: (*New Jersey Discharger*)²⁵

- Operations with more than 1,000 slaughter or feeder cattle, 700 dairy cattle, 2,500 swine, 500 horses or other animal populations; or,
- Operations with more than 300 slaughter or feeder cattle, 200 dairy cattle, 750 swine, 150 horses or other animal populations, and which discharge pollutants directly to state waterways either through manmade devices or as a result of water passing through the facility or having direct contact with confined animals. Farms that fit into this latter category are required to have Waste Management Plans to ensure that animal wastes are properly managed. In addition, any livestock operation receiving EQIP funds must have a Waste Management Plan.

The NJDEP has outlined a statewide strategy to manage and regulate these operations. The strategy calls for NJDEP to administer CAFO permits, and NJDA to administer the appropriate measures for AFOs. (*2006 Agricultural Smart Growth Plan*) The permits and measures require development and implementation of comprehensive waste management plans, utilizing "Criteria and Standards for Animal Waste Management", proposed by NJDA in March 2008, and scheduled for adoption in late 2008. (*Monique Purcell*)²⁶ This strategy emphasizes the use of cost-effective voluntary measures, limiting the need for permits. (*2006 Agricultural Smart Growth Plan*)

NJDEP, Division of Water Quality - Concentrated Animal Feeding Operations

To protect the quality of surface and groundwater in and around animal farming operations, the NJDEP has adopted a general permit for managing and regulating Concentrated Animal Feeding Operations (CAFOs). The permit is administered through the New Jersey Pollutant Discharge Elimination System (NJPDES) regulations at N.J.A.C. 7:14A-2.13, under authority of the Water Pollution Control Act. In general, the permits require CAFOs to comply with the federal effluent limitation guidelines that prohibit discharge to state waters. *(New Jersey Discharger)*

The New Jersey Department of Agriculture, State Soil Conservation Committee, Natural Resources Conservation Service and New Jersey Soil Conservation Districts have partnered with NJDEP to implement the general permit as part of a statewide strategy to control pollution from CAFOs. *(New Jersey Discharger)*

Recycling

Recycling should be an important part of natural resource conservation for the agriculture industry. Recycling saves natural resources, and can also save farmers money through creative reuse, such as using leaves and grass clippings to mulch and fertilize farm fields, and saving on solid waste disposal costs. Recycling reduces the amount of refuse finding its way to limited landfill space. Corn and hay, the dominant farm products by acreage in Union Township, use limited products which can be recycled, and as such limit recycling opportunities.

Access to Regional and Statewide Programs

Union Township's Environmental Commission publishes a quarterly newsletter and the AAC adds information, when available, regarding regional and statewide environmental and waste management programs. This publication is mailed to every home and farm owner in the Township.

Energy Conservation Planning

Energy conservation makes economic sense for Union Township agriculture businesses. The less energy a farmer uses, the less money spent on energy, and the more money that can be invested elsewhere, or realized as profit. However, energy conservation and the use of alternate technologies also make environmental sense. They help keep the air, water and soil clean, and minimize or eliminate further pollution to these critical agricultural resources. Also, with the impending threat of global warming due to excessive carbon dioxide emissions into the atmosphere, energy conservation and the use of alternative energy sources can help to slow this warming trend.

This goal of reducing greenhouse gases is indicated in the Regional Greenhouse Gas Initiative (RGGI), a compact signed by the Governors of ten states, including New

Jersey. As part of RGGI, the potential trading of carbon credits between energy companies and farmers can offer financial incentives for farmers to utilize processes that minimize carbon dioxide production. (David Dech)²⁷

In its 2006 “Agricultural Smart Growth Plan”, the New Jersey Department of Agriculture emphasizes the importance of energy conservation and alternative energy use. The Plan indicates that it is important to:

“Promote the use of innovative technologies, recycling, energy conservation and renewable energy systems on New Jersey’s farms” and to “Promote, provide technical assistance for and inform the agricultural community about new and existing energy conservation and renewable energy programs by promoting the financial and environmental benefits of implementing these programs.” Also, the NJDA indicates that “Through (these) numerous efforts coordinated between the state and federal levels, New Jersey’s agricultural community is proving itself to be an important player in protecting our state’s natural resources. Clearly, there is more work to be done, and the agricultural community has shown initiative in pursuing alternative energy sources, such as solar, wind and bio-gas in running farm operations, and by being a leader in the pursuit of ethanol and bio-diesel fuel markets.” (2006 Agricultural Smart Growth Plan)

The SADC does not have a formal policy for the use of wind and solar energy on commercial farms. However, discussions with the SADC indicate:

- SADC is supportive of solar and wind energy use on commercial farms as long as the main purpose of the produced energy is for use on the farm. This does not preclude the sale of excess energy production back to the power grid; and,
- Installation of solar panels, wind turbines and other appurtenant equipment must not negatively impact production of the agricultural land, and agricultural land must not be taken out of production.

(Steve Bruder)²⁸

There is only minimal effort to initiate energy conservation in Hunterdon County municipalities, including Union Township. The EQIP natural resource conservation program pays for some energy production programs, such as replacement of older, dirty polluting diesel engines, with newer, more efficient, cleaner burning engines. EQIP also pays rebates to farmers for the use of bio-diesel, and is also used to rebate farmers who have installed solar panels. (Kent Hardmeyer and/or Ron Phelps) The Township will provide educational outreach to its farmland owner through the Environment Commission’s newsletter. The Township would host a seminar to encourage more participation in relevant programs to encourage local participation.

Land Use codes in Union Township encourage energy conservation. Currently no agricultural land has been lost as a result of accommodating alternative energy. If this should arise, each case will be assessed individually by the AAC in coordination with the Township Committee and Planning Board.

Solar Energy

Solar energy can be harnessed via the installation of solar panels. This harnessed or stored energy can then be used to create electricity and provide heat. If excess electricity is generated, it can be sold back to the electric grid for a profit. The overall use of solar panels has greatly increased in New Jersey over the last decade. (*Agriculture and Green Energy*)²⁹ This increase is due in large part to a rebate program sponsored by the New Jersey Board of Public Utilities (BPU), and a federal investment tax credit. However, the BPU has altered its rebate program to support less solar power rebates, converting the program, in part, to “solar renewable energy certificates”. The market value of these certificates is not determined, and the federal tax credit is set to expire at the end of calendar year 2008. This uncertainty has caused a slowdown in the interest of farmers to pursue solar energy on their farms. It is hoped that the BPU will again fully fund the rebate program, and the federal tax credit will be extended. (*New Jersey Farm Bureau*)³⁰

EQIP does provide some funding for solar panels, and Union Township farmers interested in using this alternate energy source can contact the local NRCS office in Frenchtown for more information. Some farmers in Union Township have already taken the initiative and installed solar panels to help meet their energy needs. There has also been some discussion about adding solar panels to the roof of the school, but this project is only in conceptual stages. (*Michele McBride*)³¹

Other programs available to help agricultural producers take advantage of this technology include:

- U.S. Department of Energy, “Solar Energy Technology Program”, <http://www1.eere.energy.gov/solar/>
- “Solar Energy for New Jersey Agriculture” work and information sheet at <http://www.state.nj.us/agriculture/pdf/solarenergyguide.pdf>.

Solar energy is one of the fastest growing sectors in the alternative energy market, and Union Township farmers can take advantage of this money and energy saving technology.

Wind Energy

The power of a strong wind can be captured by turbines or windmills, turning such power into electricity. Expanding and evolving technology is making this option more attractive to farmers as a way to cut energy costs. According to the NJDA, the northwest part of New Jersey, which includes Hunterdon County, has ample and consistent enough wind power to make turbine energy feasible. (*2006 Agricultural Smart Growth Plan*) Installation of wind turbines would serve as an example of their commitment this alternative energy source.

Ethanol and Pelletized Switchgrass

Ethanol is a renewable fuel “made by distilling the starch and sugar in a variety of plants.” (*Agriculture and Green Energy*) It can then be blended into gasoline as an

“oxygenate”, reducing air pollution. Its use also reduces dependence on foreign oil, and the harmful environmental effects of oil drilling. Also, unlike the gasoline additive MTBE, ethanol will not contaminate groundwater. (*Agriculture and Green Energy*) Corn crops could position the Township’s farmers to financially capitalize on the spreading movement towards ethanol-blended fuels. More study would need to be done on whether this would be profitable for farmers, and how it would affect other local agriculture industries (for instance, how it would affect the dairy industry’s supply of, and price for, feed corn). In addition, interest has been shown in utilizing switchgrass to make energy producing pellets. This could add another market for Union Township farmers, and another source of clean energy.

Renewable Energy Grant Programs

The NJDA provides the following information on renewable energy grant programs, which can help encourage the use of these energy sources:

New Jersey Clean Energy Program: Administered by the New Jersey Board of Public Utilities, this program provides financial incentives to install clean energy systems, including fuel cells, solar energy, small wind and sustainable biomass equipment. Financial incentives are in the form of rebates, grants, energy certificates and loans. Additional information is at www.njcep.com/.

Renewable Energy Systems and Energy Efficiency Improvements Program: As part of the 2008 Farm Bill, this program “funds grants and loan guarantees to agricultural producers for assistance with purchasing renewable energy systems and making energy efficiency improvements.” Final rules for loans and grants were adopted by the U.S. Department of Agriculture in July 2005. Additional information can be found at www.rurdev.usda.gov/rbs/farmbill/index.html.

Biomass Research and Development Initiative Grants: The United States Departments of Agriculture and Energy support development of biomass energy. Grants are available for research, development and demonstrations on bio-based products, bio-energy, bio-fuels, bio-power and additional related processes. In the recent past, grants have focused on development and demonstration projects that lead to greater commercialization. Additional information is available at:

<http://www.state.nj.us/agriculture/news/hottopics/topics060222.html>.
(*Agriculture and Green Energy*)

Outreach and Incentives

Outreach and incentives for the Township are the responsibility of the Agricultural Advisory Committee and the Environmental Commission. The Environmental Commission organizes various Township sponsored events, puts out a biannual newsletter, and occasionally hosts guest speakers. As new programs are developed, the AAC will study whether they are meeting the needs of the local farmers and conduct

directed outreach to the farmers to provide details on the individual program and the program's environmental objectives.

¹ United States Department of Agriculture, Natural Resources Conservation Service, Information for Farmers. <http://www.nj.nrcs.usda.gov/farmers.html>. Accessed April 2007.

² Personal communication with Kent Hardmeyer and/or Ron Phelps, United States Department of Agriculture, Natural Resources Conservation Service, May 15 and 16, 2007. June 2007. August 12, 2008.

³ Personal Communication with Ken Bingham, United States Department of Agriculture, Farm Service Agency. June 2007.

⁴ United States Department of Agriculture, Natural Resources Conservation Service, New Jersey. <http://www.nj.nrcs.usda.gov/>. Accessed October 2008.

⁵ New Jersey Department of Agriculture, Agricultural and Natural Resources. <http://www.state.nj.us/agriculture/divisions/anr/>. Accessed April 2007.

⁶ Hunterdon County Planning Department, Hunterdon County Agriculture Development Board. Hunterdon County Comprehensive Farmland Preservation Plan. 2008.

⁷ Rutgers New Jersey Agricultural Experiment Station. Cooperative Extension of Hunterdon County. <http://njaes.rutgers.edu/personnel/unit.asp?id=85&s=u>. Accessed November 2008.

⁸ New Jersey Department of Environmental Protection, Division of Parks and Forestry, Private Lands Management Program. http://www.nj.gov/dep/parksandforests/forest/njfs_private_lands_mgt.html. Accessed April 2007.

⁹ Personal Communication with Jim Barresi, Assistant Director, New Jersey Department of Environmental Protection, Division of Parks and Forestry. June 2007.

¹⁰ New Jersey Department of Agriculture, State Agriculture Development Committee. Farmland Assessment 2005, Tax Year 2006, Hunterdon County Summary.

¹¹ North Jersey Resource Conservation and Development Council. <http://www.northjerseyrcd.org/>. Accessed November 2007.

¹² United States Department of Agriculture, Conservation Programs Offered In New Jersey, Programs Available in 2006. ftp://ftp-fc.sc.egov.usda.gov/NJ/programs/Conservation_Programs_Offered_in_New_Jersey.pdf. Accessed April 2007.

¹³ United States Department of Agriculture, Natural Resources Conservation Service, Farm Bill Programs, <http://www.nj.nrcs.usda.gov/programs/index.html#Farm%20Bill>, Accessed July 27, 2008.

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- ¹⁴ American Farmland Trust, The Farm, Nutrition and Community Investment Act.
http://www.farmland.org/programs/states/me/documents/AFT_FNCIA_S-D-G_Northeast_WebApr07.pdf. Accessed June 9, 2007.
- ¹⁵ “Farm Bureau Update” newsletter. Summer 2008, Volume 5, Number 2.
- ¹⁶ Personal communication with Jim Baird, Mid-Atlantic Region Director, American Farmland Trust. June 26, 2007.
- ¹⁷ American Farmland Trust website.
<http://www.farmland.org/search.asp?cx=013768594961239324390%3Aeqdfpceu3bo&cof=FORID%3A11&q=2008+farm+bill&imageField.x=15&imageField.y=12#0>. Accessed July 27, 2008.
- ¹⁸ United States Department of Agriculture, Natural Resources Conservation Service, Conservation Programs. <http://www.nj.nrcs.usda.gov/programs/>. Accessed April 2007.
- ¹⁹ Personal communication with Dave Schaaf, District Manager, Warren County Soil Conservation District. June 2007.
- ²⁰ New Jersey Department of Agriculture, Soil and Water Conservation Grants.
<http://www.state.nj.us/agriculture/grants/soil.html>. Accessed April 2007.
- ²¹ New Jersey Department of Agriculture, 2006 Agricultural Smart Growth Plan.
<http://www.state.nj.us/agriculture/pdf/smartgrowthplan.pdf>. Accessed April 2007.
- ²² Open Space and Recreation Plan for Township of Union County of Hunterdon, Morris Land Conservancy. 2002.
- ²³ Natural Resources Inventory. Union Township, Hunterdon County. Princeton Hydro, LLC. October 17, 2003.
- ²⁴ Personal communication, Bill Millette, Hunterdon CADB. January 2010.
- ²⁵ New Jersey Department of Environmental Protection, New Jersey Discharger, Volume 11, No. 2, Fall 2003. New Stormwater General Permit for Concentrated Animal Feeding Operations.
<http://www.state.nj.us/dep/dwq/discharg/v11n2h.htm>. Accessed April 17, 2007
- ²⁶ Personal communication with Monique Purcell, New Jersey Department of Agriculture, Division of Agriculture and Natural Resources. April 18, 2007 and/or August 25, 2008.
- ²⁷ Personal Communication with David Dech, Warren County Planning Director. October 2007.
- ²⁸ Personal communication with Steve Bruder, State Agriculture Development Committee. August 2007. July 2008.
- ²⁵ New Jersey Department of Agriculture. Agriculture and Green Energy.
<http://www.state.nj.us/agriculture/news/hottopics/topics060222.html>. Accessed April 2007.
- ³⁰ New Jersey Farm Bureau, “This Week in Farm Bureau”, Volume XLVI, No. 30, July 12, 2008.
- ³¹ E-mail from Michele McBride, Director of Operations, Barile Consulting. October 21, 2008.

CHAPTER 8: AGRICULTURAL INDUSTRY SUSTAINABILITY, RETENTION AND PROMOTION



Existing Agricultural Industry Support

Right to Farm

To ensure farmers have the ability to practice accepted agricultural operations, the Right to Farm Act (RFA) was enacted by the State Legislature in 1983 and amended in 1998. The Act provides “protection of commercial farm operations from nuisance action, where recognized methods and techniques of agricultural production are applied, while, at the same time, acknowledging the need to provide a proper balance among the varied and conflicting interests of all lawful activities in New Jersey.” (*SADC Right to Farm Program*)¹ Another critical piece of legislation to support agriculture was the 1983 Agriculture Retention and Development Act. This Act created the State Agriculture Development Committee (SADC), and eighteen County Agriculture Development Boards (CADB’s). Both the SADC and CADB implement the RFA on the State and local levels. (*New Jersey’s Great Northwest Skylands*)²

The SADC works to maximize protection for commercial farmers under the RFA by developing Agricultural Management Practices, tracking right to farm cases, offering a conflict resolution process, and reviewing rules proposed by other state agencies for the impact they may have on agriculture. In order to qualify for right to farm protection a farm must meet the definition of a “commercial farm” in the RFA; be operated in conformance with federal and state law; comply with agricultural management practices recommended by the SADC, or site specific agricultural management practices; must not be a direct threat to public health and safety; and, must be located in an area where agriculture was a permitted use under municipal zoning ordinances as of December 31, 1997, or thereafter; or, must have been an operating farm as of December 31, 1997. (*Eligibility Criteria for RTF Act Protection*)³

All right to farm complaints or issues that are brought before the Hunterdon CADB are first handled with fact finding and efforts to resolve differences between the parties. The mediation can be informal or, if the parties agree, the SADC will provide mediation or conflict resolution at no cost to the participants through its Agricultural Mediation Program. If a formal complaint is filed with the Hunterdon CADB, it is sent to the SADC for a determination as to whether the farm falls within the parameters established by the

RFA for right to farm protection. Once the complaint is returned to the Hunterdon CADB from the SADC, additional fact finding and technical review occurs and the issue is given a public, quasi-judicial hearing at the county level. After all information has been considered, the Hunterdon CADB will make a determination as to whether the agricultural activity is protected by the RFA or whether changes to the operation will be required. If the issue is not resolved by the Hunterdon CADB determination, either party in the dispute may take the matter for a subsequent appeal and determination to the New Jersey Office of Administrative Law. (*Resolving Agricultural-Related Conflicts*)⁴ There is some inconsistency in the guidelines for mediation between the Union Township Right to Farm Ordinance and the State's procedures for conflict resolution, described above. The Right to Farm Ordinance calls for mediation by the Township's Agricultural Protection Committee, after which the issue is referred to the state. The SADC calls for formal complaints to be issued with the CADB before being handled by the State.

Right to Farm Ordinances are a necessary item if a municipality, or property owner, wishes to enter into the farmland preservation program. Union Township established a Right to Farm Ordinance in 1987, only a few years after the state enacted Right to Farm in 1983. This ordinance shows Union Township's commitment to safeguarding and strengthening agricultural activities and a copy can be found in the *Appendices*.

The Ordinance states that its purpose is to “*conserve, protect and encourage the development and improvement of agricultural lands within the Township for the production of food and other agricultural products and the preservation of open space; to protect and encourage the viability of the agricultural industry by establishing a positive business climate*” and to “*help reduce the loss of agricultural land... by protecting commercial farms.*” (*Union Township Right to Farm Ordinance*)⁵

Union Township includes numerous protections for farmers in its Right to Farm Ordinance. These include protection from nuisance complaints, permission “to operate on holidays, Sundays, and weekdays”, protection of “agricultural uses and common farmsite activities”. According to the ordinance, “agricultural uses and common farmsite activities” include the following:

- “Production, harvesting, storage, grading, packaging and processing of farm products;
- wholesale and retail marketing of crops, plants, animals and other related commodities;
- the use and application of techniques and methods of soil preparation and management;
- fertilization;
- weed, disease and pest control;
- disposal of farm waste;
- irrigation, drainage, and water management
- grazing” (*Union Township Right to Farm Ordinance*)

The Township's Right to Farm Ordinance is consistent with the SADC Model Right to Farm Ordinance and is in keeping with the intent of the New Jersey legislature as

expressed in the Right to Farm Act, N.J.S.A. 4:1C-1. Both the Ordinance and the State statute give farmers protection from nuisance complaints as long as the commercial farm is in compliance with acceptable agricultural management practices and which does not pose a direct threat to public health and safety. Additionally, when there is a conflict both the State and the Township have a very similar mediation process that directs complaints to an appointed Agricultural Protection Committee for review. The AAC can help to avoid and/or minimize Right to Farm conflicts through education between neighbors and consultation with all parties before problems occur.

Farmland Assessment

The Farmland Assessment program is a tax incentive which reduces property taxes on active commercial farmed land, thereby assisting farmers with a critical financial aspect in helping to keep land in farms. This tax incentive is made possible by the Farmland Assessment Act of 1964, N.J.S.A. 54:4-23.1 et seq.

Basic eligibility requirements include:

- The applicant must own the land;
- The property owner must apply annually for Farmland Assessment on or before August 1 of the year immediately preceding the tax year;
- Land must be devoted to agricultural and/or horticultural uses for at least two years prior to the tax year;
- Land must consist of at least five contiguous farmed and/or woodland management plan acres. Land under or adjoining a farmhouse is not counted towards the minimum five acres;
- Gross sales of products from the land must average at least \$500 per year for the first five acres, plus an average of \$5.00 per acre for each acre over five. In the case of woodland or wetland, the income requirement is \$.50 per acre for any acreage over five. Dependent on the agricultural or horticultural products being produced, the farmer can also offer clear evidence of anticipated yearly gross sales, payments, or fees within a reasonable period of time; and,
- The property owner must represent that the land will continue in agricultural or horticultural use to the end of the tax year.

*(New Jersey's Farmland Assessment Act)*⁶

The Farmland Assessment program does not, however, apply to farm structures, such as barns and storage facilities. It has been proposed that additional tax incentives which encourage farmers to maintain their buildings in good working order as part of active farm operations, and which do not financially penalize them for renovating or replacing old or unsafe structures, are necessary. Maintained buildings are not only critical to the farmer but also add to farm “aesthetics” for the larger community, helping to support Agritourism, an element of agricultural sustainability in Union Township.

Union Township is 13,184 acres. Of this, 3,896 acres (or 30% percent of the Township) are under farmland assessment. According to the New Jersey Farmland Assessments from 1983 to 2006, general trends indicate:

- A 40% decrease in total land in active agricultural use from 1983 to 2005;
- Harvested cropland was 2,514 acres in 1983, which steadily decreased to 1,173 acres in 2006;
- Pastured cropland was at 227 acres in 1983, decreasing to 126 acres in 2006;
- Permanent pasture acreage was cut in half between 1983 and 2006, dropping from 702 acres to 347 acres.
- Equine acreage grew drastically between 2000 and 2004, increasing from 11 total acres to 38 acres. Since then, the amount of land devoted to equine has stayed fairly constant at 34 acres. Equine acreage was first measured in 2000;
- Overall active agricultural acreage (cropland harvested, cropland pastured, permanent pasture) in farmland assessment has steadily decreased from 5,010 acres in 1983 to 2,996 acres in 2006.
(NJDA Farmland Assessment)⁷

It is important to sustain and expand tax incentives such as Farmland Assessment to keep land in farms, and to encourage the development or extension of other tax incentives for the agricultural industry. By making agriculture more profitable and viable, tax incentives will help to ensure a steady, permanent source of agricultural lands for the Township's farmland preservation efforts. The Farmland Assessment program is essential to the viability of the farmland program in Union Township. If the farmland assessment program was limited or opportunities for enrollment reduced, there would be a significant decline in the number of farms in Union Township. Currently most farm improvements are included with the Farmland Assessment program in the Township. The AAC would support higher "rollback" fees for conversion of farmland to non-agricultural use.

Additional Strategies to Sustain, Retain, and Promote Agriculture in Union Township

Regulatory Flexibility

Municipalities play a key role in the preservation of farming as an industry. In municipalities with a sizable acreage of assessed farmland, zoning powers can be utilized to require buffers between agriculture and other uses to minimize conflict. The Right to Farm Ordinances is an active example of municipalities' support for agriculture. Such actions create an atmosphere favorable to agriculture, its economics and profitability.

The viability of farming in New Jersey is impacted by many issues, including government regulation, development pressures, and the economics of the marketplace. While land preservation is vital for maintaining a sufficient land base suitable for farming, sustaining Union Township's strong agricultural base requires support on many fronts, one of which is flexibility in government regulation. (2006 Agricultural Smart Growth Plan)⁸ It is essential that the Union Township Agricultural Advisory Committee, Hunterdon CADB, Department of Land Preservation, Board of Agriculture, County Freeholders, Soil Conservation District, Natural Resource Conservation Service, Rutgers

Cooperative Extension of Hunterdon County, private farm preservation groups, and other interested entities and individuals work together to present a united front in issues regarding government regulation and permits as they relate to agriculture. The 2006 *Agricultural Smart Growth Plan* for New Jersey identified the following as important relative to regulatory flexibility and priority, and which the aforementioned entities must work to ensure proper advantage for agriculture in Union Township:

- *Positive and supportive public policy*: This includes legal protection (right to farm), priority in decisions on taxation (farmland assessment), regulation exemptions, and financial incentives (planning incentive grants). These need to be strengthened and modified if, and when, necessary;
- *Exemptions*: State, county, and municipal regulations must be responsive to the needs of farmers. Minor changes to, or exemptions from, certain local and state regulations, rules, and ordinances help to buffer agricultural operations from burdensome costs, creating a farmer-friendly environment. At a state level, the Department of Environmental Protection's "Freshwater Wetlands Protection Act Rules" (N.J.A.C. 7:7A-et. seq.) and the "Flood Hazard Area Control Act Rules" (N.J.A.C. 7:13) grant exemptions, permits by rule, or general permits for agricultural activities. In addition, for the Department of Environmental Protection's "Highlands Water Protection and Planning Act Rules" (N.J.A.C. 7:38), exemptions are allowed for activities conducted in accordance with an approved Woodland Management Plan issued pursuant to the Farmland Assessment Act. The Union Township agriculture community must work to ensure that exemptions are adequate and reasonable;
- *Flexibility*: State agencies such as the Department of Environmental Protection, Department of Transportation, Department of Community Affairs, Department of Labor, and New Jersey Commerce Commission, should consider the NJDA Agricultural Smart Growth Plan when making important decisions regarding existing and proposed infrastructure, developing and amending regulations and programs, and protecting environmental and historical resources. These agencies should coordinate with NJDA to ensure that regulations and programs are attuned to the needs of Hunterdon County and Union Township farmers;
- *Agriculture-Friendly Zoning*: This refers to a comprehensive land use practice that coordinates zoning and land use policy in a proactive way. The desired result is that it encourages agribusiness, while at the same time reducing the incidence of farmer-homeowner nuisance issues. In other words, it seeks to harmonize potentially conflicting land use policies. This strategy would be done mostly at the local and county levels.

(2006 Agricultural Smart Growth Plan)

Farm Labor

An adequate labor supply is integral to harvesting vegetables, fruits, and berries. Measured in farmed acreage, Union Township has a relatively small industry for these products compared with field crops such as corn and hay. Harvesting of the latter farm products is more mechanized, and/or not as labor intensive as produce, with most work being done by farm family members. *(Kent Hardmeyer)*⁹ As of 2006, 63 acres were

devoted to fruits, berries, and vegetables, while 1,136 acres were devoted to field crops and nursery products. (*NJDA Farmland Assessment*) Since the overall acreage devoted to labor intensive farming is small in Union Township, farm labor housing, a large issue in towns and counties with high farm labor populations is, for the most part, not of high concern in the Township.

Rising farm labor costs in Hunterdon County are not currently impacting agriculture sustainability, which is due at least in part to the continued strong trend of mechanized, non-labor intensive crop farming in the county. However, as this trend may change over time, a brief discussion of the topic is warranted.

The New Jersey Department of Labor recommends the following to address farm labor issues at the state and local levels:

- Work with the U.S. Department of Agriculture's Rural Development program to reexamine program criteria to enable New Jersey's rural communities to qualify for more programs related to farm labor. The current focus of the program, such as rural area infrastructure, is not applicable to Hunterdon County (and New Jersey).
- Link neighborhood revitalization efforts with housing opportunities for farm workers and, where appropriate, establish on-site housing, to ensure a safe and stable workforce.
- Develop and promote comprehensive and ongoing training opportunities for farm workers.
- Work with the New Jersey Department of Labor, Rutgers Cooperative Extension and others to provide farm safety training.
- Join other agricultural stakeholders in supporting ongoing efforts at the federal level to streamline and modernize the immigration process.

(*2006 Agricultural Smart Growth Plan*)

In January 2006, the "Agriculture Transition Policy Group" (Group), composed of government and agriculture industry representatives, submitted a report to then Governor-elect Jon Corzine, with recommendations to keep agriculture strong and viable in the Garden State. The Group reported many serious problems facing New Jersey farm employers. Two of these are the impacts of the new state minimum wage (now \$7.15 per hour), and the ever looming issue before the U.S. Congress regarding immigration and undocumented workers. The Group reports that the sponsor of the minimum wage legislation has promised to "re-visit the issue for agriculture to find some off-sets that will protect farm viability and keep the industry at a competitive level." (*Agriculture Transition Policy Group, Final Report*)¹⁰ The cost of labor in New Jersey is a critical issue for some farming sectors such as produce, and one that needs further consideration for its effect on agriculture in Hunterdon County and New Jersey. This is because as labor costs increase, so does the cost to farmers producing commodities. Though a farmer may wish to raise his/her prices to cover increased production costs, this is many times not feasible due to competition from neighboring states with lower production (i.e. labor) costs. The result is lower profits for Hunterdon County and Union Township farmers, making the business of farming less profitable, and therefore more difficult.

The New Jersey Department of Agriculture has specified the identification and posting of new markets as a specific strategy in its 2007 Economic Development Strategies report. This effort is a necessary outgrowth of the report's finding that due to the State's high labor rates (in addition to high land values and property taxes) production costs in New Jersey are higher than in most other areas. With commodity prices based on national production costs, yields and demand, it is less profitable to produce commodity items in New Jersey than elsewhere. *(2007 Economic Development Strategies)*¹¹

Farmer Education

To sustain a modern, diverse and stable food and agricultural industry, education and progressive, ongoing training for farmers will promote a more efficient and productive business environment. This includes programs covering "farmer risk management education, agricultural leadership training, secondary school and college agricultural education." *(2006 Agricultural Smart Growth Plan)*

One educational link for Union Township agricultural land owners and operators is to collaborate with the Rutgers Cooperative Extension (RCE) of Hunterdon County (associated with the School of Environmental and Biological Sciences (formerly Cook College), Rutgers University). During the growing season, RCE of Hunterdon County provides one-on-one, on-site consultations with farmers to assist with control of insect infestations and plant diseases for fruits, vegetables, greenhouse nurseries and ornamentals, and also for field crops. Similar farm animal consultation is provided on a year round basis. During the growing season, RCE of Hunterdon County also conducts "twilight meetings" for fruits and vegetables at local farms, to discuss a wide range of issues relative to these agricultural products. In August of every year a twilight meeting is held locally to discuss sustainable horticulture. *(Bill Tietjen)*¹²

RCE of Hunterdon County also provides practical assistance to farmers. Examples are assistance in obtaining pesticide application licenses (necessary to buy and apply pesticides), and also to obtain water certification and registration permits from the New Jersey Department of Environmental Protection, for groundwater and/or surface water allocations. Finally, the RCE of Hunterdon County performs applied research on area farms to further knowledge on a wide range of issues pertaining to agricultural plants and animals. Results of any research are used to advise local farmers on an as needed basis. *(Bill Tietjen)* All of the aforementioned available programs and assistance offer an individual farm operator the opportunity to gain the latest information on numerous and pertinent agriculture topics, which are important to agricultural sustainability. Union Township farmers should take advantage of these resources on an ongoing, and as needed basis.

Through its Division of Agriculture and Natural Resources, Natural Resource Conservation Program, the New Jersey Department of Agriculture offers technical, financial, and regulatory assistance, and provides educational outreach to landowners throughout the state. The Department also offers, in conjunction with the U.S.

Department of Agriculture, farm risk management and crop insurance education programs to assist farmers in understanding what assistance is available to reduce agricultural risks. *(2006 Agricultural Smart Growth Plan)*

Hired farm workers continue to be one of the most economically disadvantaged groups in the United States due to low wages, seasonal employment and limited participation in the non-farm labor market. Therefore, as an important statewide resource to the agricultural industry, the New Jersey Department of Labor recommends that more must be done to ensure a well-trained, educated farm labor workforce, that has adequate living and working conditions, and is trained in worker safety. *(2006 Agricultural Smart Growth Plan)*

Agriculture labor education and training funding may be available through the New Jersey Department of Labor and Workforce Development programs. These programs can help to assist in upgrading the skills and productivity of the agricultural workforce. *(NJDA, Training)*¹³ Some of the programs which may be applicable include Customized Training Initiative, Basic Skills Program, and Occupational Safety and Health Training Program.

Finally, as a form of “education”, government agencies at the state and county level can provide continuous outreach information to farmers, to ensure they take full advantage of all federal and state loan, grant, education, and technical assistance programs. This is especially important since these programs are meant to aid the farming business to thrive and survive. Due to the complexity and vast array of the programs, they may be unknown to many farmers.

Youth Farmer Education Programs

The farmer population in Hunterdon County is getting older, but Union Township is fortunate enough to have a handful of young farmers who have taken an interest in continuing this valuable practice. To prevent an aging farmer population and ensure the viability of the agricultural industry, the next generation of the county’s farmers needs to become interested in and exposed to the business of agriculture, and be prepared to enter the industry. Educational programs in agriculture offered as an optional and viable opportunity for the youth of Union Township will assist those who are interested in pursuing such careers. Creating new opportunities via secondary and post secondary education programs in Agriculture, Food and Natural Resources will reassure students that opportunities exist for them in Union Township, and wider Hunterdon County. *(2006 Agricultural Smart Growth Plan)*

The National Future Farmers of America (FFA) Organization “*operates under a Federal Charter granted by the 81st Congress of the United States, and is an integral part of public instruction in agriculture.*” *(National FFA Organization)*¹⁴ The National FFA Organization was founded in 1928, and currently has 7,242 chapters and nearly 500,000 members. *(National FFA Organization)* Through the local FFA and New Jersey Department of Agriculture’s Office of Agriculture, Food and Natural Resource

Education, Hunterdon County offers youth agriculture education at South Hunterdon Regional High School, with a feeder program at the South Hunterdon Middle School. *(Nancy Trivette)*¹⁵ This is the only local FFA chapter, but is extremely active within the County, winning numerous awards. *(Nancy Trivette)* David Ritter is the local FFA representative and can be contacted at (609) 397-2060 x1252 for further information.

Programs that address the broader nature of agriculture education can be found at Hunterdon County Polytechnic, which offers a pre-veterinary science program focusing on the treatment of equine and other large animals. This program may be of particular interest for residents of Union Township, where horses are quite common.

Youth agriculture education classes or programs are not offered at any elementary schools within the County, but are an opportunity to cultivate young people's interest in the field of agriculture. Currently, the youngest age group that participates in such programs are middle school students.

The national Agriculture in the Classroom program helps K-12 students become aware of the importance of agriculture. 4-H is an informal, practical educational program for youth, which assists young people interested in farm animals through livestock projects. The New Jersey Agricultural Society's Agriculture Leadership Program provides young professionals in agriculture with leadership development skills and opportunities. *(2006 Agricultural Smart Growth Plan)*

In addition, the New Jersey Department of Agriculture offers an "Agricultural Education" program. This is "a systematic program of instruction available to students desiring to learn about the science, business, and technology of plant and animal production and/or about the environmental and natural resources systems. A complete Agricultural Education program is composed of three components: class/lab instruction, supervised agricultural experience (SAE), and FFA, which provide a well-rounded and practical approach to student learning." *(NJDA, Agricultural Education)*¹⁶

Public outreach

Over the last 50 years, New Jersey has transformed away from a largely rural and agricultural landscape, to a more urban and suburban landscape. However, farming remains strong and viable in many portions of the state, including Union Township. If the Township's many remaining agricultural areas are to survive and prosper, the non-farming public needs to be aware of the continuing financial, cultural, scenic and agricultural contributions made by Union Township. Methods to expand public outreach efforts in Union Township are through increased signage, events, and opportunities for "on the ground" solicitation of farming operations including pick-your-own operations and local farm stands.

Management of nuisance and crop damaging wildlife

Management of nuisance and crop damaging wildlife is critical to the short and long term sustainability of Union Township's agriculture industry. Crop damage from wildlife leads to economic loss for the farmer and/or land owner, and is an extremely serious problem throughout Hunterdon County. Most damage is caused by a multitude of insects, as well as deer, bear, turkey, and other wildlife. It is important to not only control and manage damage to crops, but to also do it in a manner which causes the least amount of collateral natural resource damage; that is, limit pesticide use to the greatest extent possible, using natural pest control.

One key way for Union Township farmers to control damage from deer, bear, and turkey is through hunting of crop damaging animals. This hunting is allowed through depredation permits, issued by the New Jersey Department of Environmental Protection (NJDEP)'s Fish and Wildlife Program. In many instances, this is the only short term solution to control crop damage by what is widely considered an excessive deer population in Union Township and Hunterdon County.

The New Jersey Department of Agriculture's Division of Plant Industry works to safeguard New Jersey's plant resources from injurious insect and disease pests. The Division implements several programs for detection, inspection, eradication and control of insect pests, which helps to ensure that the public can enjoy high quality, pest-free agricultural products. (*Division of Plant Industry*)¹⁷ In addition, "the Division oversees programs that certify plant stock for interstate and international shipments, protects forested communities from tree loss caused by the gypsy moth and Asian longhorned beetle, inspects honeybees for harmful bee diseases and pests, regulates the quality of plant seeds, and produces and releases beneficial insects to reduce crop and environmental damage, and decrease dependence on chemical pesticides." (*Division of Plant Industry*) Protection of forest resources is important to Union Township farmers who harvest wood as part of Woodland Management Plans on their farmland assessed properties.

Agriculture vehicle movement

In recent years, as many portions of the rural landscape have become developed with residential subdivisions, the sometimes conflicting lifestyles of farmers and residents clash. Union Township farmers need to move heavy, slow moving agricultural equipment over local, county and sometimes state roads to access unconnected fields and barns. Local residents also need to commute to workplaces, or drive to area destinations for shopping, town sports and social activities, at a pace much faster than the slow moving agricultural equipment. These different paces can, and do, cause conflict between Union Township's farmers and other residents, while creating unsafe road conditions as residents and farmers "compete" for road space.

Signage alerting fast moving cars as to the possible movement and road crossing of slow moving farm vehicles is an additional effective tool to protect farmer (and automobile passenger) safety. Signage also informs the public at large that agriculture is an important, equal and permanent fixture of life in Union Township. Where absent or inadequate, appropriate signage can be posted.

If local non-agriculture residents are to enjoy the scenic vistas, fresh produce, clean air and limited traffic congestion that Hunterdon County's agriculture provides, they must be more tolerant of the farming community. Local, county and state government can advertise the contributions of the farming community via public outreach at local schools and various community activities.

Federal Programs

The federal government is an important partner in supporting Hunterdon County and Union Township agriculture. There are several federal programs that support, or could support, the agricultural industry in the Township.

USDA Rural Development Program

Known as the Rural Development Program, the United States Department of Agriculture (USDA) has an extensive array of loans and grants to assist residents in rural areas of the country to support essential public facilities and services such as water and sewer systems, housing, health clinics, emergency service facilities, and electric and telephone service. Through the program, the USDA offers technical assistance and information to agricultural cooperatives, as well as to communities for empowerment programs. With a multi-billion dollar portfolio of loans, loan guarantees, and grants, the USDA can be an effective partner to assist with agriculture sustainability. (*Rural Development*)¹⁸

Grants and loans are available in three key areas: Rural Business-Cooperative Service, Rural Housing Service, and Rural Utilities Service. To qualify for many of the program's loans and grants, municipalities must have less than 10,000 residents. (*2006 Agricultural Smart Growth Plan*) At a population of approximately 6,160, Union Township may qualify for these loans and grants. (*2000 Census*)¹⁹

Income Averaging for Farmers

The U.S. Taxpayer Relief Act of 1997, administered by the U.S. Department of Treasury's Internal Revenue Service, is meant to smooth out economic disparities that farmers experience from year to year due to the cyclical nature of agriculture. Known as Farm Income Averaging, qualified farmers can average all or part of their current year farm income over the previous three years. Substantial tax dollars can be saved by income averaging. (*United States Department of the Treasury*)²⁰

In the New Jersey Legislature, New Jersey Senate Bill 1425 is presently being considered by the Senate Economic Growth Committee, while Assembly Bill 1692 is being considered by the Assembly's Agriculture and Natural Resources, and Appropriations

Committees. (*Ben Kurtzman*)²¹ These bills would provide income averaging similar to the federal program described above. The New Jersey Department of Agriculture, State Agriculture Development Committee, Hunterdon County Freeholders, and Hunterdon County Agriculture Development Board can work with, and encourage, the New Jersey Legislature to adopt income averaging legislation. This would greatly assist Hunterdon County farmers, and farmers statewide, to remain economically viable.

USDA Farm Service Agriculture Program

Farming is a business which can be extremely cyclical and unpredictable, with factors, such as weather and market conditions, out of the farmer's control. As such, farmers often need assistance to make ends meet, to stay profitable, and to stay in business. Many times federal government programs are available. Union Township farmers can take advantage of these loans as a tool in running their farm businesses.

The United States Department of Agriculture (USDA), Farm Service Agency (FSA) makes “... *guaranteed farm ownership and operating loans to (beginning farmers), family-size farmers and ranchers who cannot obtain commercial credit from a bank, Farm Credit System institution, or other lender*”, often due to financial setbacks from natural disasters, or whose resources are too limited to maintain profitable farming operations. FSA loans can be used for most agriculture necessities such as purchasing land, livestock, equipment, feed, seed, supplies, and also for construction of buildings, or to make farm improvements. (*Farm Service Agency*)²²

The FSA also makes "Direct" farm loans. These loans include supervision and credit counseling for farmers so they have a better chance for success. Under this program, farm ownership, operating, emergency and youth loans are the main types of loans available, but there are also minority applicant and beginning farmer loans. (*Farm Service Agency*) These farm loans have not been made in Union Township in recent years. However, in Hunterdon County farm loans have been as follows:

- Fiscal year 2009 has requested three loans, totaling \$515,000. They will be used for operating expenses, to refinance debt, and purchase milking equipment, finish electric and earthwork on a barn, and to purchase cows.
- Fiscal year 2008 had four loans, totaling \$109,800. They were used to buy a livestock trailer, dairy animals, equipment, and to refinance operating debt.
- Fiscal year 2006 had three loans, totaling \$75,000. They were used to buy hay equipment and for operating expenses.
- Fiscal year 2005 had six loans, totaling \$390,360. They were used to buy hay equipment, dairy animals and equipment, refinance real estate debt, and for operating expenses.

(*Virginia Brophy*)²³

The FSA office for Hunterdon County is located at 687 Pittstown Road, Suite 2 in Frenchtown. The County Executive Agent is Doreen Beruck, and she may be reached at (908) 782-4614, or at Doreen.Beruck@nj.usda.gov. Ms. Beruck should be contacted by Union Township farmers for assistance in determining whether they qualify for these

loans, and assistance in applying. This FSA office also administers the financial aspect of the CREP program, which was discussed in *Chapter 7*.

Township of Union: Vision for Farmland Preservation

The Mission Statement of the Union Township Agricultural Advisory Committee:

The mission of the Union Township Agricultural Advisory Committee is to preserve the Township's thriving farming community and retain the Township's prime agricultural lands to secure and sustain the livelihood of its farmers. The preservation of productive farmland will ensure the health of the local economy as well as the health of the natural resources that supports the Township's agricultural industry. Protecting the agricultural lands and its supporting infrastructure will ensure the Township's rural landscape remains secure.

Goals of the Union Township Agricultural Advisory Committee:

The Township's Agricultural Advisory Committee seeks to preserve agricultural land in the Township where the farmer is interested in participating in preservation programs and where the land is currently in agricultural production or has a strong potential for sustained agricultural production in the future. To date, 790 acres of farmland have been preserved through acquisition and deed restriction. The AAC would like to continue preserve the rural character and agricultural economy of the Township.

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⁴ New Jersey Department of Agriculture, State Agriculture Development Committee, Right to Farm Program: Resolving Agricultural-Related Conflicts <http://www.nj.gov/agriculture/sadc/rffprogram/conflictres/>. Accessed October 28, 2008.

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⁶ New Jersey Department of Agriculture, New Jersey's Farmland Assessment Act, An Informational Guide on Basic Requirements. July 2006.

⁷ New Jersey Department of Agriculture, State Agricultural Development Committee. Farmland Assessment. Tax Years 1983, 1990, 2000, 2004, 2005, and 2006. Hunterdon County Summary.

⁸ New Jersey Department of Agriculture, Agricultural Smart Growth Plan 2006. <http://www.state.nj.us/agriculture/pdf/smartgrowthplan.pdf> Accessed March 27, 2007.

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¹⁴ National Future Farmers of America (FFA) Organization, Agricultural Science Education. <http://www.ffa.org/>. Accessed October 27, 2008.

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²¹ Ben Kurtzman, Legislative Specialist, American Farmland Trust. E-mail communication. April 4, 2007.

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²³ Personal Communication with Virginia Brophy, United States Department of Agriculture, Farm Service Agency. August 12, 2008.

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Maps

a. Farmland Map

b. Agricultural Soils Categories

**c. Union Township Project Areas and Hunterdon
County Agricultural Development Area**

**d. Farm Parcels that meet SADC Minimum Eligibility
Criteria for Agricultural Soils**

**e. Farm Parcels that meet SADC Minimum Eligibility
Criteria for Tillable Land**

**f. Farm Parcels that meet SADC Minimum Eligibility
Criteria for both Tillable Land and Soils**

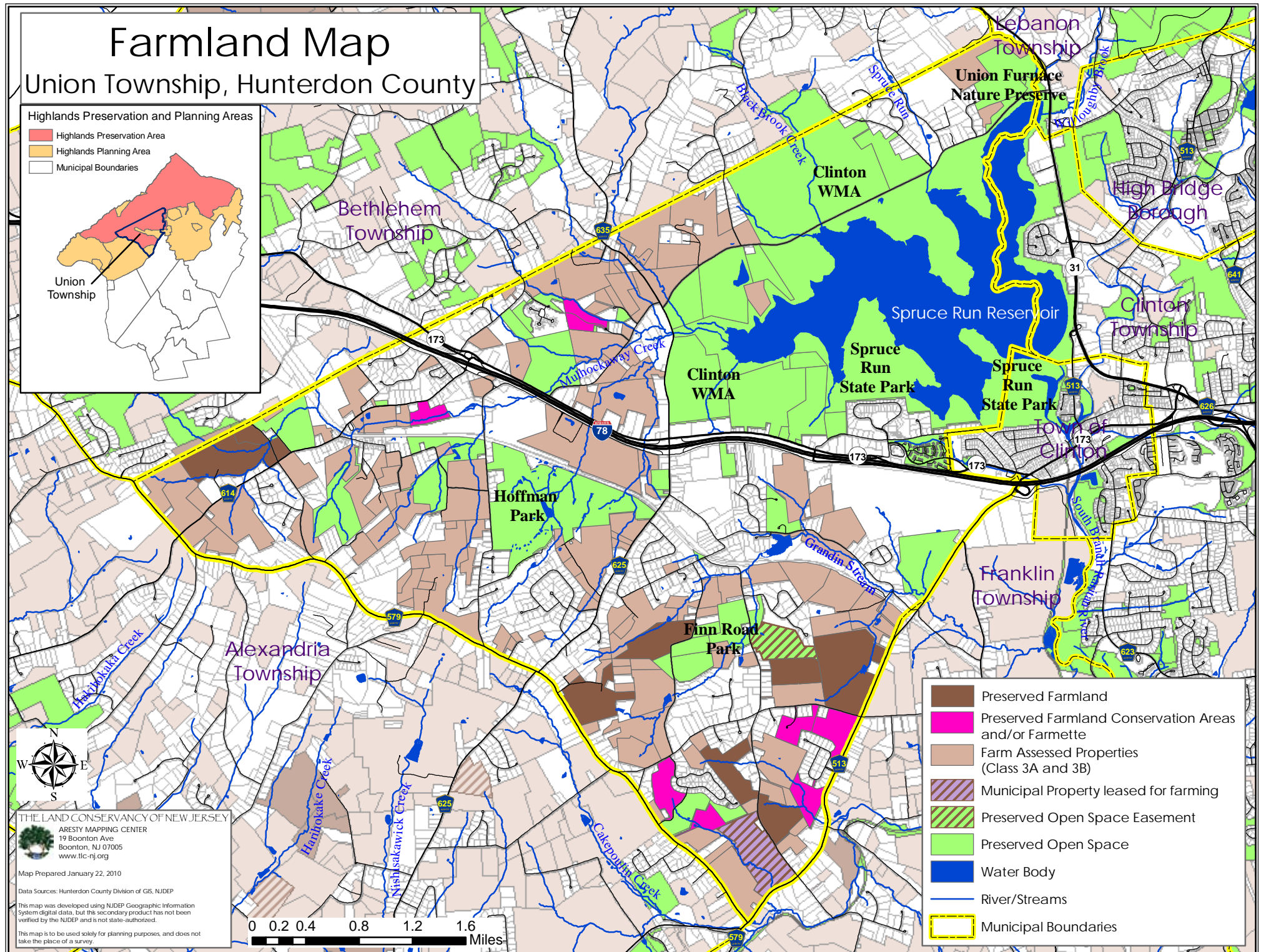
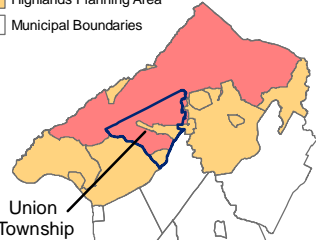
g. Targeted Farms

Farmland Map

Union Township, Hunterdon County

Highlands Preservation and Planning Areas

- Highlands Preservation Area
- Highlands Planning Area
- Municipal Boundaries



- Preserved Farmland
- Preserved Farmland Conservation Areas and/or Farmette
- Farm Assessed Properties (Class 3A and 3B)
- Municipal Property leased for farming
- Preserved Open Space Easement
- Preserved Open Space
- Water Body
- River/Streams
- Municipal Boundaries



THE LAND CONSERVANCY OF NEW JERSEY

ARESTY MAPPING CENTER
19 Boonton Ave
Boonton, NJ 07005
www.tlc-nj.org

Map Prepared January 22, 2010

Data Sources: Hunterdon County Division of GIS, NJDEP

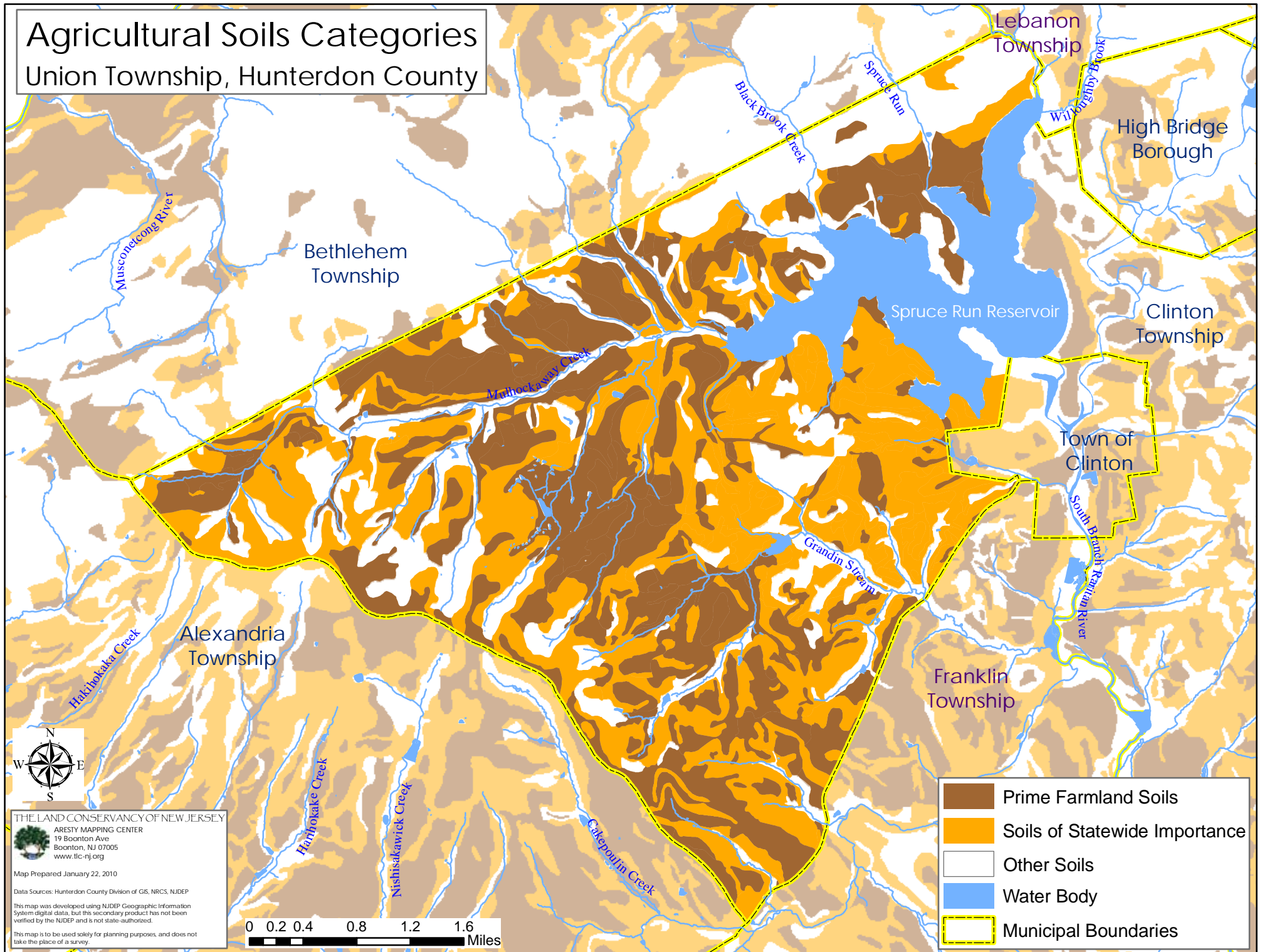
This map was developed using NJDEP Geographic Information System digital data, but this secondary product has not been verified by the NJDEP and is not state-authorized.

This map is to be used solely for planning purposes, and does not take the place of a survey.

0 0.2 0.4 0.8 1.2 1.6 Miles

Agricultural Soils Categories

Union Township, Hunterdon County



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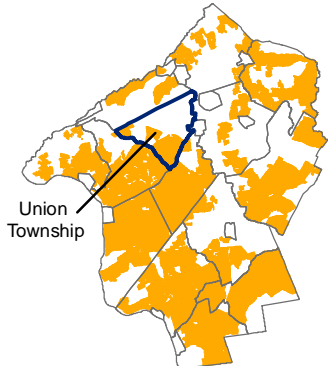
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Miles

- Prime Farmland Soils
- Soils of Statewide Importance
- Other Soils
- Water Body
- Municipal Boundaries

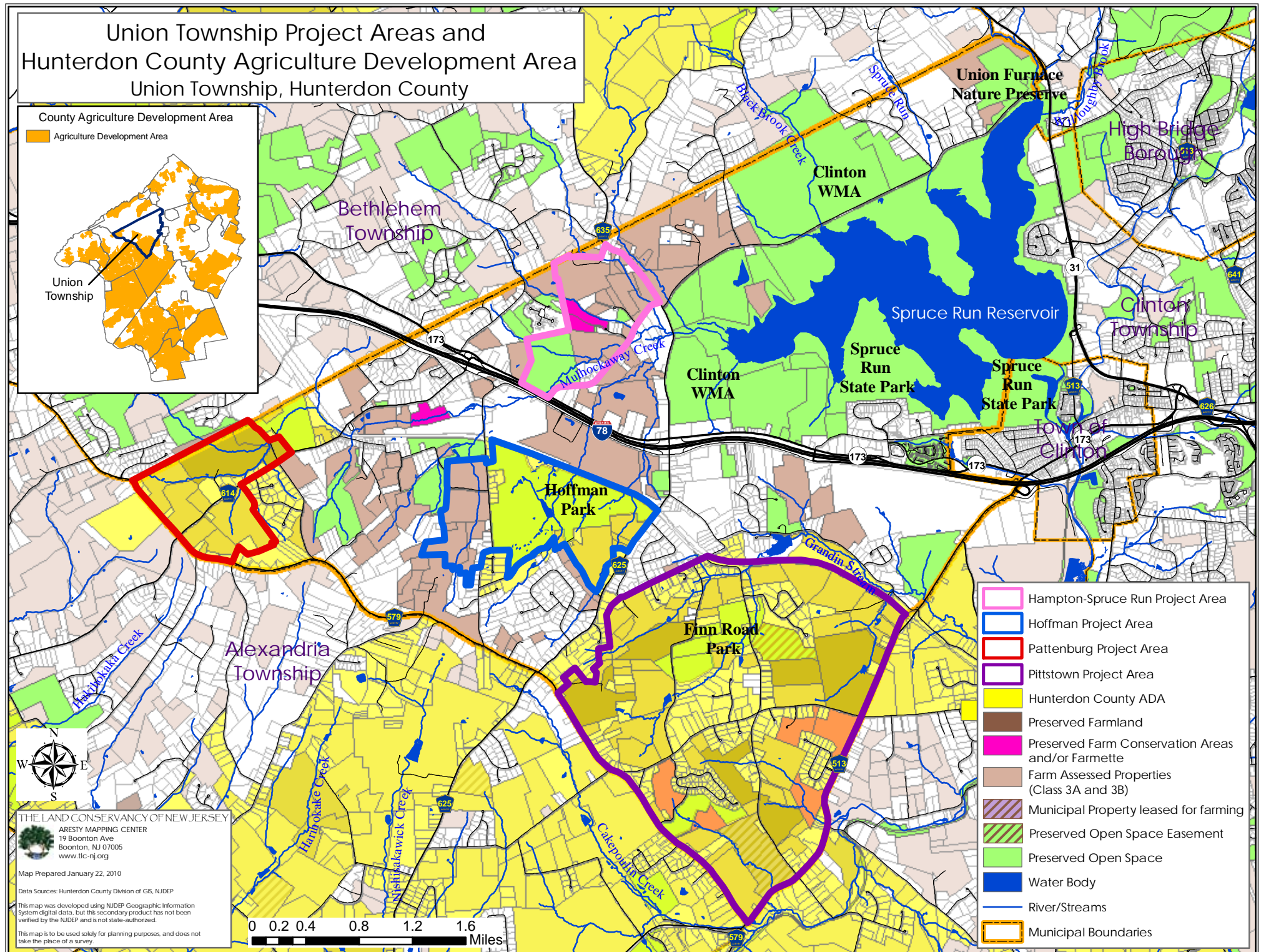
Union Township Project Areas and Hunterdon County Agriculture Development Area Union Township, Hunterdon County

County Agriculture Development Area

Agriculture Development Area



Union Township



- Hampton-Spruce Run Project Area
- Hoffman Project Area
- Pattenburg Project Area
- Pittstown Project Area
- Hunterdon County ADA
- Preserved Farmland
- Preserved Farm Conservation Areas and/or Farmette
- Farm Assessed Properties (Class 3A and 3B)
- Municipal Property leased for farming
- Preserved Open Space Easement
- Preserved Open Space
- Water Body
- River/Streams
- Municipal Boundaries



THE LAND CONSERVANCY OF NEW JERSEY

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Map Prepared January 22, 2010

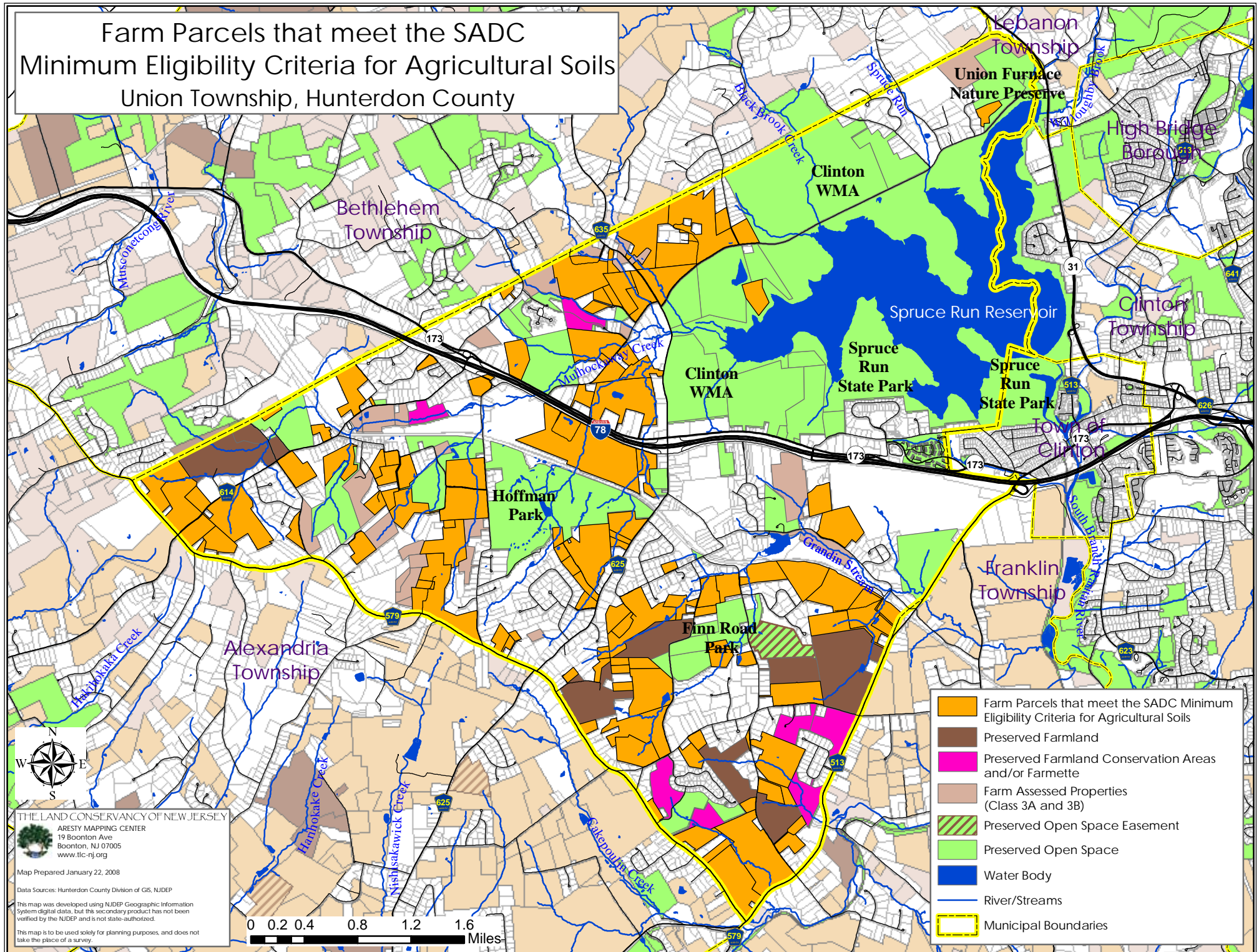
Data Sources: Hunterdon County Division of GIS, NJDEP

This map was developed using NJDEP Geographic Information System digital data, but this secondary product has not been verified by the NJDEP and is not state-authorized.

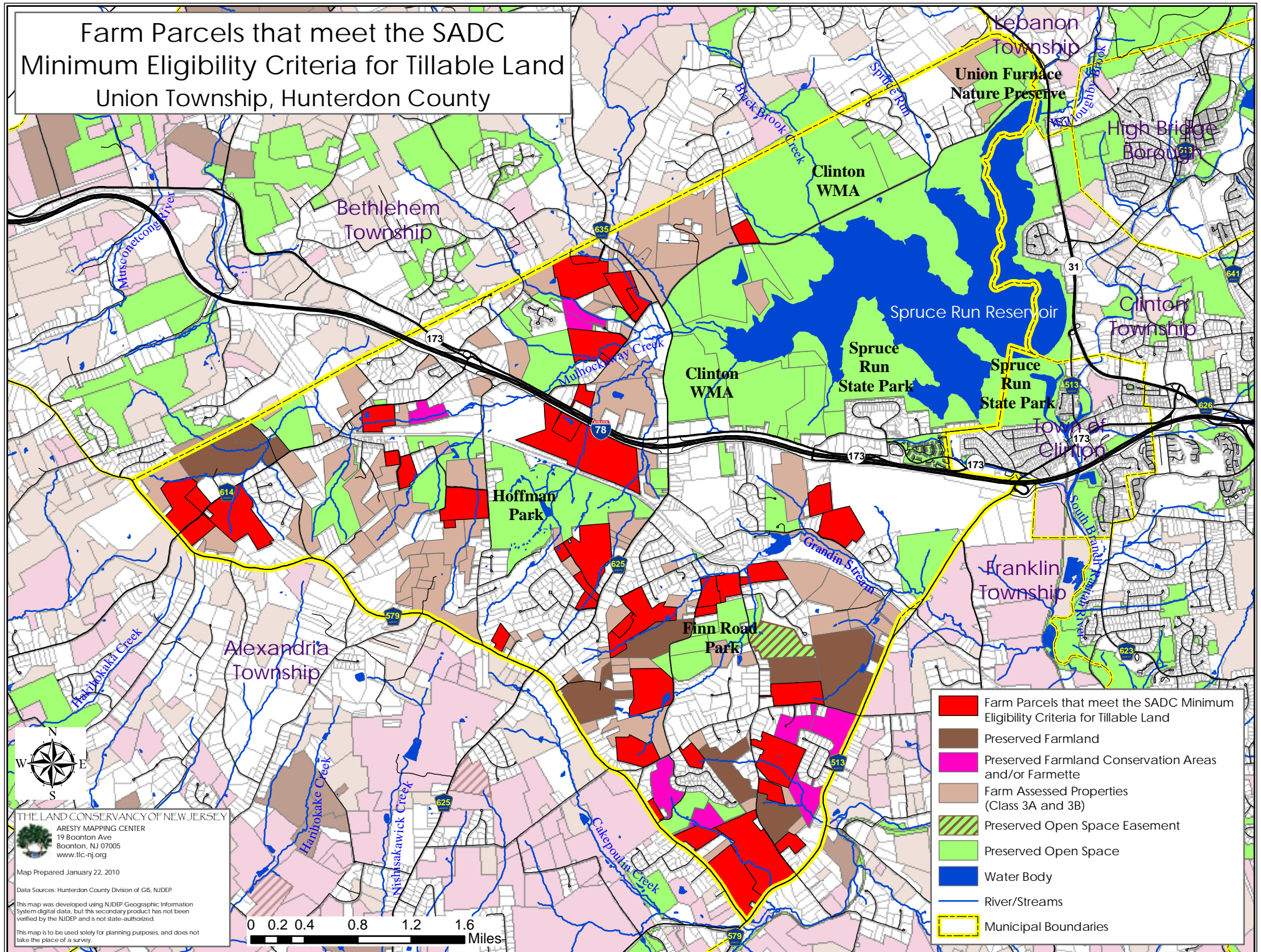
This map is to be used solely for planning purposes, and does not take the place of a survey.

0 0.2 0.4 0.8 1.2 1.6
Miles

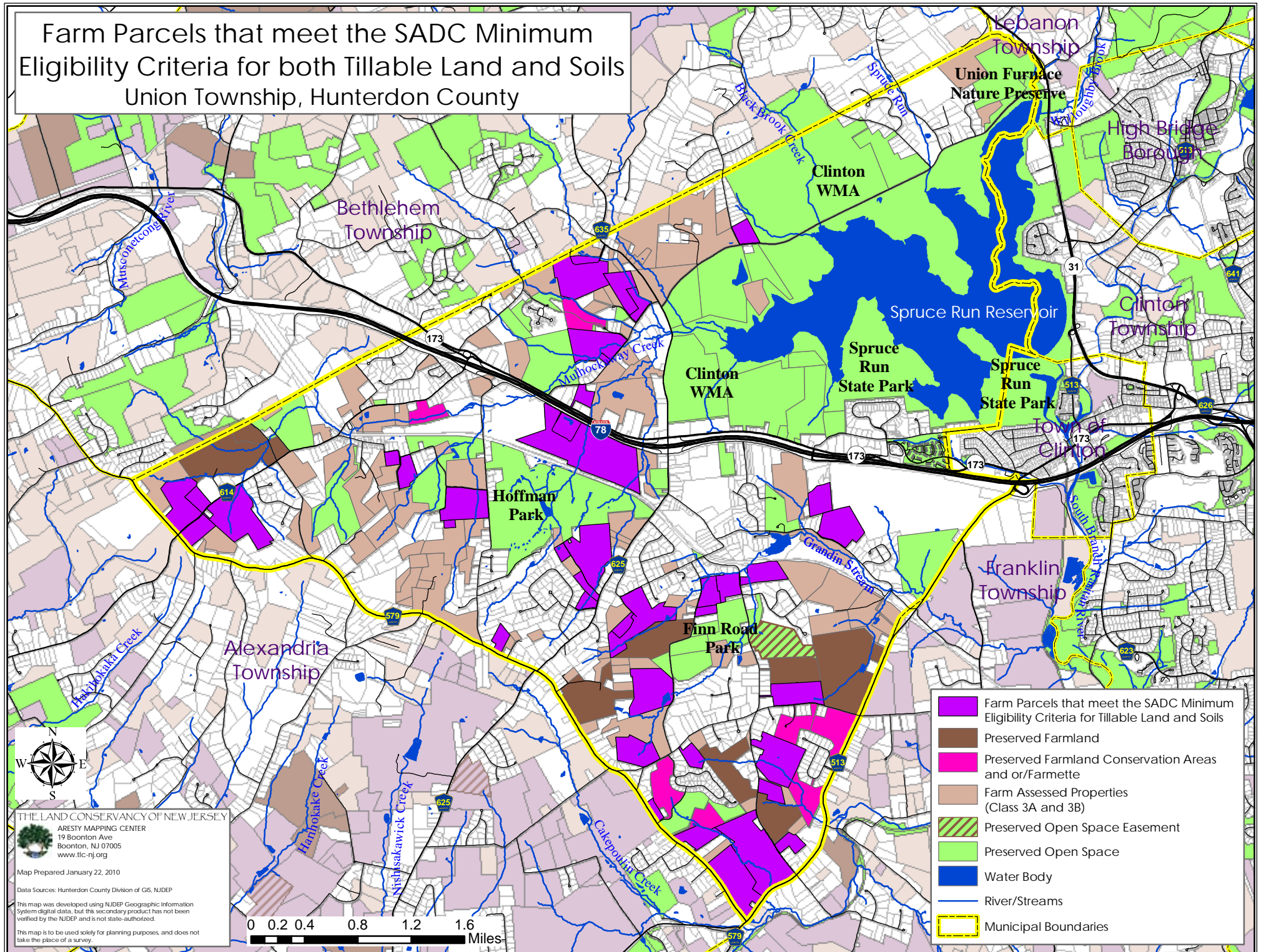
Farm Parcels that meet the SADC Minimum Eligibility Criteria for Agricultural Soils Union Township, Hunterdon County



Farm Parcels that meet the SADC Minimum Eligibility Criteria for Tillable Land Union Township, Hunterdon County

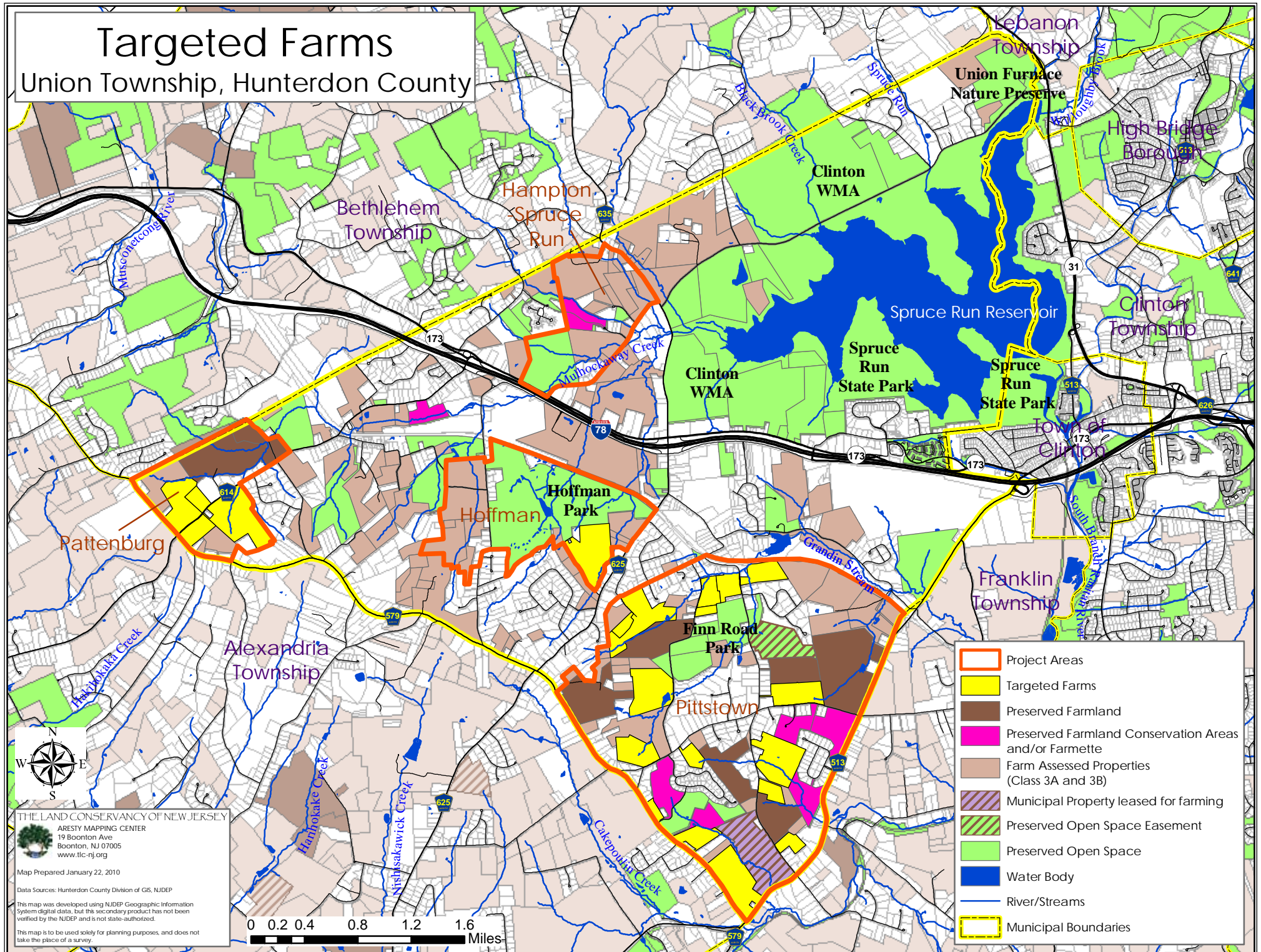


Farm Parcels that meet the SADC Minimum Eligibility Criteria for both Tillable Land and Soils Union Township, Hunterdon County



Targeted Farms

Union Township, Hunterdon County



Appendices

a. Public Hearing #1- November 5, 2008– Notice and

Agenda

b. Public Hearing #2 – February 17, 2010 – Notice and

Agenda

c. SADC Deed of Easement

d. Union Township Right to Farm Ordinance: 1987 -

Ordinance 87-2

e. Parcel Data Tables:

1. Farm Assessed Parcels in Union Township

2. Farm Parcels Meeting the SADC Minimum

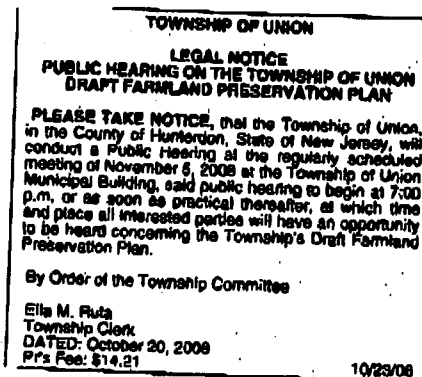
Eligibility Criteria for Agricultural Soils

3. Farm Parcels Meeting the SADC Minimum

Eligibility Criteria Tillable Land

4. Targeted Farms

STATE OF NEW JERSEY,) ss.
HUNTERDON COUNTY



Margaret M. Gerke, of full age, being duly
sworn, on her oath saith that she is the
Controller of the

Hunterdon County Democrat

a weekly newspaper published
in Flemington, in the said County of
Hunterdon, and that the advertisement,
of which the printed slip hereto annexed
is a true copy, was published in the
above named newspaper on the:
23rd day of October, 2008,
and for no weeks successively
thereafter, once in each week, making
one insertion in all.

Controller

SWORN AND SUBSCRIBED

before me, this the 23rd day
of October, 2008.

Linda P. Ecker

LINDA P. ECKER
Notary Public of New Jersey
My Commission Expires 5/11/2010
No. 2177836

Township of Union

Invites the Public

To Provide Comment on the

Draft Comprehensive Farmland Preservation Plan

Wednesday, November 5, 2008
7:00 pm

Union Township Municipal Building

Agenda

- **Welcome and Introduction**
Frank T. Mazza, Mayor
Paige DiRoberto, Chair, Agricultural Advisory Committee
- **Framework of Farmland Planning Process**
 - Overview of the Farmland Plan
 - Presentation of the Farmland Maps
 - Identification of Project Areas and Land Preservation Goals
Barbara Heskins Davis, The Land Conservancy of New Jersey
- **Public Comment on Draft Plan and Maps**
Audience

Why draft an Updated Farmland Preservation Plan?

The primary purpose of completing the Farmland Preservation Plan for the Township is to provide a vision and strategy for the preservation of agricultural resources. This Plan will prioritize farmland for preservation based upon input local farmland owners, residents, municipal officials, county board and committees. The Plan will conform to the updated State Agriculture Development Committee (SADC) guidelines and can be used by the Township to apply for funding through the Planning Incentive Grant program from the SADC. The Plan is a requirement for eligibility into this Program.

Anticipated Timeline:

September 15, 2008: SADC deadline for municipal notification to County Board

November 5, 2008: Public Meeting #1: Vision Meeting for Updated Farmland Plan

December 15, 2008: SADC deadline for submittal of Draft Plan to the state

February 15, 2009: SADC deadline for releasing comments on Draft Plan

March 2009: Public Meeting #2: Public Comments on Draft Farmland Plan

April 2009: Final Farmland Preservation Plan delivered to Township and SADC

For further information please contact:



The Land Conservancy of New Jersey
19 Boonton Avenue
Boonton, NJ 07005
(973) 541-1010
www.tlc-nj.org email: info@tlc-nj.org

Township of Union Agricultural Advisory Committee
140 Perryville Road
Hampton, NJ 08827
(908) 735-8027
www.uniontwp-hcnj.org

**LEGAL NOTICE OF PUBLIC HEARING
PROPOSED AMENDMENT TO THE FARMLAND PRESERVATION
PLAN ELEMENT OF THE Union Township Master Plan**

PLEASE TAKE NOTICE that on February 17, 2010 at 7:00 p.m. the Union Township Committee will conduct a public hearing on a proposed amendment to the farmland preservation plan element of the Union Township Master Plan to be submitted to the SADC as part of the Township's Planning Incentive Grant.

The public hearing will be conducted at the Union Township Municipal Building, 140 Perryville Road, Hampton, NJ, at which time you may appear in person or by agent and present any comments you may have relative to said plan. A copy of the proposed amendment to the Master Plan shall be on file and available for public inspection at least ten days prior to the date of said hearing at the office of the Land Use Board at the Union Township Municipal Building.

BY: _____
Union Township Planning Board/Board of Adjustment
Secretary

Township of Union
Invites the Public
To Provide Comment on the
Comprehensive Farmland Preservation Plan

Wednesday, February 17, 2010
7:00 pm

Union Township Municipal Building

Agenda

- **Welcome and Introduction**
Matt Severino, Mayor
Paige DiRoberto, Chair, Agricultural Advisory Committee
- **Farmland Preservation Plan - Presentation**
 - Overview of the Farmland Plan
 - Presentation of the Farmland Maps
 - Project Areas and Land Preservation Goals
Barbara Heskins Davis, The Land Conservancy of New Jersey
- **Public Comment on Plan and Maps**
Audience

For further information please contact:



The Land Conservancy of New Jersey
19 Boonton Avenue
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Township of Union Agricultural Advisory Committee
140 Perryville Road
Hampton, NJ 08827
(908) 735-8027
www.uniontwp-hcnj.org

E3-E

DEED OF EASEMENT
STATE OF NEW JERSEY
AGRICULTURE RETENTION AND DEVELOPMENT PROGRAM

This Deed is made _____, 20 _____.

BETWEEN _____, whose address is _____ and is referred to as the Grantor;

AND _____, whose address is _____ and is referred to as the Grantee and/or Board.

The Grantor, Grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns grants and conveys to the Grantee a development easement and all of the nonagricultural development rights and credits on the Premises, located in the Township of _____, County of _____, described in the attached Schedule A, and, for the limited purpose of the restrictions contained in Paragraph 13(b), the tract of land described in the attached Schedule C, which schedules are incorporated by reference in this Deed of Easement, for and in consideration of the sum of _____ Dollars.

Any reference in this Deed of Easement to "Premises" refers to the property described in Schedule A, and, for the limited purpose of the restrictions contained in Paragraph 13(b), to the tract of land described in Schedule C.

The tax map reference for the Premises is:

Township of _____
Block _____, Lot _____

WHEREAS, the legislature of the State of New Jersey has declared that the development of agriculture and the retention of farmlands are important to the present and future economy of the State and the welfare of the citizens of the State; and

WHEREAS, the Grantor is the sole and exclusive owner of the Premises; and

WHEREAS, the Grantee believes that the retention and preservation of agricultural lands is beneficial to the public health, safety and welfare of the citizens of _____ County;

NOW THEREFORE, THE GRANTOR, GRANTOR'S HEIRS, EXECUTORS, ADMINISTRATORS, PERSONAL OR LEGAL REPRESENTATIVES, SUCCESSORS AND ASSIGNS PROMISES that the Premises will be owned, used and conveyed subject to, and not in violation of the following restrictions:

1. Any development of the Premises for nonagricultural purposes is expressly prohibited.
2. The Premises shall be retained for agricultural use and production in compliance with N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32, and all other rules promulgated by the State Agriculture Development Committee, (hereinafter Committee). Agricultural use shall mean the use of the Premises for common farmsite activities including, but not limited to: production, harvesting, storage, grading, packaging, processing and the wholesale and retail marketing of crops, plants, animals and other related commodities and the use and application of techniques and methods of soil preparation and management, fertilization, weed, disease and pest control, disposal of farm waste, irrigation, drainage and water management and grazing.
3. Grantor certifies that at the time of the application to sell the development easement to the Grantee and at the time of the execution of this Deed of Easement the nonagricultural uses indicated on attached Schedule (B) existed on the Premises. All other nonagricultural uses are prohibited except as expressly provided in this Deed of Easement.

Prepared by: _____

4. All nonagricultural uses, if any, existing on the Premises at the time of the landowner's application to the Grantee as set forth in Section 3 above may be continued and any structure may be restored or repaired in the event of partial destruction thereof, subject to the following:

- i. No new structures or the expansion of pre-existing structures for nonagricultural use are permitted;
- ii. No change in the pre-existing nonagricultural use is permitted;
- iii. No expansion of the pre-existing nonagricultural use is permitted; and
- iv. In the event that the Grantor abandons the pre-existing nonagricultural use, the right of the Grantor to continue the use is extinguished.

5. No sand, gravel, loam, rock, or other minerals shall be deposited on or removed from the Premises excepting only those materials required for the agricultural purpose for which the land is being used.

6. No dumping or placing of trash or waste material shall be permitted on the Premises unless expressly recommended by the Committee as an agricultural management practice.

7. No activity shall be permitted on the Premises which would be detrimental to drainage, flood control, water conservation, erosion control, or soil conservation, nor shall any other activity be permitted which would be detrimental to the continued agricultural use of the Premises.

- i. Grantor shall obtain within one year of the date of this Deed of Easement, a farm conservation plan approved by the local soil conservation district.
- ii. Grantor's long term objectives shall conform with the provisions of the farm conservation plan.

8. Grantee and Committee and their agents shall be permitted access to, and to enter upon, the Premises at all reasonable times, but solely for the purpose of inspection in order to enforce and assure compliance with the terms and conditions of this Deed of Easement. Grantee agrees to give Grantor, at least 24 hours advance notice of its intention to enter the Premises, and further, to limit such times of entry to the daylight hours on regular business days of the week.

9. Grantor may use the Premises to derive income from certain recreational activities such as hunting, fishing, cross country skiing and ecological tours, only if such activities do not interfere with the actual use of the land for agricultural production and that the activities only utilize the Premises in its existing condition. Other recreational activities from which income is derived and which alter the Premises, such as golf courses and athletic fields, are prohibited.

10. Nothing shall be construed to convey a right to the public of access to or use of the Premises except as stated in this Deed of Easement or as otherwise provided by law.

11. Nothing shall impose upon the Grantor any duty to maintain the Premises in any particular state, or condition, except as provided for in this Deed of Easement.

12. Nothing in this Deed of Easement shall be deemed to restrict the right of Grantor, to maintain all roads and trails existing upon the Premises as of the date of this Deed of Easement. Grantor shall be permitted to construct, improve or reconstruct any roadway necessary to service crops, bogs, agricultural buildings, or reservoirs as may be necessary.

13(a). At the time of this conveyance, Grantor has existing single family residential buildings on the Premises and residential buildings used for agricultural labor purposes. Grantor may use, maintain, and improve existing buildings on the Premises subject to the following conditions:

- i. Improvements to agricultural buildings shall be consistent with agricultural uses;
- ii. Improvements to residential buildings shall be consistent with agricultural or single and extended family residential uses. Improvements to residential buildings for the purpose of housing agricultural labor are permitted only if the housed agricultural labor is employed on the Premises; and
- iii. Improvements to recreational buildings shall be consistent with agricultural or recreational uses.

13(b). Grantor, their heirs, executors, administrators, personal or legal representatives, successors and assigns may use and maintain the Exception Area, as described in the attached Schedule C, conditions:

sample conditions:

- a. the Exception Area shall not be severed or subdivided from the Premises
- b. the Exception area may be severed and subdivided from the Premises
- c. the Exception Area shall be limited to one residential unit
- d. (Right to Farm Language if Exception is Non-Severable)

Grantors, grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns or any person who is occupying or residing on the Exception Area as well as the heirs, executors, administrators, personal or legal representatives, successors and assigns of all such persons are hereby notified and made aware that the Exception Area is adjacent to a parcel ("Premises") permanently deed restricted under the Agriculture Retention and Development Act, N.J.S.A. 4:1C-11 et seq. Such persons occupying or residing on the Exception Area are notified and made aware that agriculture is the accepted and preferred use of the adjacent Premises and that the adjacent Premises shall continue in agricultural use as defined in Section 2 of the Deed of Easement.

- e. (Right to Farm Language if Exception is Severable)

Grantors, grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns or any person to whom title to the Exception Area is transferred as well as the heirs, executors, administrators, personal or legal representatives, successors and assigns of all such persons are hereby notified and made aware that the Exception Area is adjacent to a parcel ("Premises") permanently deed restricted under the Agriculture Retention and Development Act, N.J.S.A. 4:1C-11 et seq. Such persons taking title to the Exception Area are notified and made aware that agriculture is the accepted and preferred use of the adjacent Premises and that the adjacent Premises shall continue in agricultural use as defined in Section 2 of the Deed of Easement.

14. Grantor may construct any new buildings for agricultural purposes. The construction of any new buildings for residential use, regardless of its purpose, shall be prohibited except as follows:

- i. To provide structures for housing of agricultural labor employed on the Premises but only with the approval of the Grantee and the Committee. If Grantee and the Committee grant approval for the construction of agricultural labor housing, such housing shall not be used as a residence for Grantor, Grantor's spouse, Grantor's parents, Grantor's lineal descendants, adopted or natural, Grantor's spouse's parents, Grantor's spouse's lineal descendants, adopted or natural; and
- ii. To construct a single family residential building anywhere on the Premises in order to replace any single family residential building in existence at the time of conveyance of this Deed of Easement but only with the approval of the Grantee and Committee.
- iii. _____ residual dwelling site opportunity(ies) have been allocated to the Premises pursuant to the provisions of N.J.A.C. 2:76-6.17, "Residual Dwelling Site Opportunity". The Grantor's request to exercise a residual dwelling site opportunity shall comply with the rules promulgated by the Committee in effect at the time the request is initiated.

In the event a division of the Premises occurs in compliance with deed restriction No. 15 below, the Grantor shall prepare or cause to be prepared a Corrective Deed of Easement reflecting the reallocation of the residual dwelling site opportunities to the respective divided lots. The Corrective Deed shall be recorded with the County Clerk. A copy of the recorded Corrective Deed shall be provided to the Grantee and Committee.

In the event a residual dwelling site opportunity has been approved by the Grantee, the Grantor shall prepare or cause to be prepared a Corrective Deed of Easement at the time of Grantee's approval. The Corrective Deed of Easement shall reflect the reduction of residual dwelling site opportunities allocated to the Premises. The Corrective Deed shall be recorded with the

County Clerk. A copy of the recorded Corrective Deed shall be provided to the Grantee and Committee.

(OR)

- iii. No residual dwelling site opportunities have been allocated pursuant to the provisions of N.J.A.C. 2:76-6.17. No residential buildings are permitted on the Premises except as provided in this Deed of Easement.

For the purpose of this Deed of Easement:

"Residual dwelling site opportunity" means the potential to construct a residential unit and other appurtenant structures on the Premises in accordance with N.J.A.C. 2:76-6.17.

"Residual dwelling site" means the location of the residential unit and other appurtenant structures.

"Residential unit" means the residential building to be used for single family residential housing and its appurtenant uses. The construction and use of the residential unit shall be for agricultural purposes.

"Use for agricultural purposes" as related to the exercise of a residual dwelling site opportunity and the continued use of the residential unit constructed thereto, means at least one person residing in the residential unit shall be regularly engaged in common farmsite activities on the Premises including, but not limited to: production, harvesting, storage, grading, packaging, processing and the wholesale and retail marketing of crops, plants, animals and other related commodities and the use and application of techniques and methods of soil preparation and management, fertilization, weed, disease and pest control, disposal of farm waste, irrigation, drainage, water management and grazing.

15. The land and its buildings which are affected may be sold collectively or individually for continued agricultural use as defined in Section 2 of this Deed of Easement. However, no division of the land shall be permitted without the joint approval in writing of the Grantee and the Committee. In order for the Grantor to receive approval, the Grantee and Committee must find that the division shall be for an agricultural purpose and result in agriculturally viable parcels. Division means any division of the Premises, for any purpose, subsequent to the effective date of this Deed of Easement.

- i. For purposes of this Deed of Easement, "Agriculturally viable parcel" means that each parcel is capable of sustaining a variety of agricultural operations that yield a reasonable economic return under normal conditions, solely from each parcel's agricultural output.

16. In the event of any violation of the terms and conditions of this Deed of Easement, Grantee or the Committee may institute, in the name of the State of New Jersey, any proceedings to enforce these terms and conditions including the institution of suit to enjoin such violations and to require restoration of the Premises to its prior condition. Grantee or the Committee do not waive or forfeit the right to take any other legal action necessary to insure compliance with the terms, conditions, and purpose of this Deed of Easement by a prior failure to act.

17. This Deed of Easement imposes no obligation or restriction on the Grantor's use of the Premises except as specifically set forth in this Deed of Easement.

18. This Deed of Easement is binding upon the Grantor, the Grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns and the Grantee; it shall be construed as a restriction running with the land and shall be binding upon any person to whom title to the Premises is transferred as well as upon the heirs, executors, administrators, personal or legal representatives, successors, and assigns of all such persons.

19. Throughout this Deed of Easement, the singular shall include the plural, and the masculine shall include the feminine, unless the text indicates otherwise.

20. The word 'Grantor' shall mean any and all persons who lawfully succeed to the rights and responsibilities of the Grantor, including but not limited to the Grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns.

21. Wherever in this Deed of Easement any party shall be designated or referred to by name or general reference, such designation shall have the same effect as if the words, 'heirs, executors, administrators, personal or legal representatives, successors and assigns' have been inserted after each and every designation.

22. Grantor, Grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns further transfers and conveys to Grantee all of the nonagricultural development rights and development credits appurtenant to the lands and Premises described herein. Nothing contained herein shall preclude the conveyance or retention of said rights by the Grantee as may be permitted by the laws of the State of New Jersey in the future. In the event that the law permits the conveyance of said development rights, Grantee agrees to reimburse the Committee (_____) percent of the value of the development rights as determined at the time of the subsequent conveyance.

23. That portion of the net proceeds, representing the value of the land only (and not the value of the improvements), of a condemnation award or other disposition of the Premises following termination of this Deed of Easement, as permitted pursuant to N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32, shall be distributed among the Grantor and the Grantee in shares in proportion to the fair market value of their interests in the Premises on the date of execution of this Deed of Easement. For this purpose, the Grantee's allocable share of the proceeds shall be the net proceeds multiplied by a fraction, the numerator of which is the fair market value of the development easement as certified by the Committee at the time of the initial acquisition and the denominator of which is the full fair market value of the unrestricted Premises as certified by the Committee at the time of the initial acquisition, which is identified as (/).

Furthermore, the Grantee's proceeds shall be distributed among the Grantee and the Committee in shares in proportion to their respective cost share grants on the date of execution of this Deed of Easement. The Grantee shall use its share of the proceeds in a manner consistent with the provisions of N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32.

24. No historic building or structure located on the Premises may be demolished by the grantor or any other person without the prior approval of the State Agriculture Development Committee. Historic building or structure is a building or structure that, as of the date of this Deed of Easement, has been included in the New Jersey Register of Historic Places established pursuant to N.J.S.A. 13:1B-15.128 et seq.

The Grantor signs this Deed of Easement as of the date of the top of the first page. If the Grantor is a corporation, this Deed of Easement is signed and attested to by its proper corporate officers, and its corporate seal, if any, is affixed.

_____(L.S.)
_____(L.S.)
_____(Corporate Seal)
Secretary
(For use by corporations only)

(INDIVIDUAL ACKNOWLEDGMENT)

STATE OF NEW JERSEY, COUNTY OF _____ SS.:

I CERTIFY that on _____, 20 ____,

_____ personally came before me and acknowledged under oath, to my satisfaction, this that person (or if more than one, each person):

- (a) is named in and personally signed this DEED OF EASEMENT;
- (b) signed, sealed and delivered this DEED OF EASEMENT as his or her act and deed;
- (c) made this DEED OF EASEMENT for and in consideration of mutual obligations and benefits to each party; and
- (d) the actual and true consideration paid for this instrument is \$_____.

Print name and title below signature

(CORPORATE ACKNOWLEDGMENT)

STATE OF NEW JERSEY, COUNTY OF _____ SS.:

I CERTIFY that on _____ 20 ____, the subscriber

_____, personally appeared before me, who, being by me duly sworn on his or her oath, deposes and makes proof to my satisfaction, that he or she is the Secretary of _____, the Corporation named in the within Instrument; that _____ is the President of said Corporation; that the execution, as well as the making of this Instrument, has been duly authorized by a proper resolution of the Board of Directors of the said Corporation, that deponent well knows the corporate seal of said Corporation; and that the seal affixed to said Instrument is the proper corporate seal and was thereto affixed and said Instrument signed and delivered by said President as and for the voluntary act and deed of said Corporation, in presence of deponent, who thereupon subscribed his or her name thereto as attesting witness; and that the full and actual consideration paid to purchase a development easement as evidenced by the DEED OF EASEMENT is \$ _____ and the mutual obligations and benefits contained herein.

Sworn to and subscribed before me, the date aforesaid

Print name and title below signature

(COUNTY AGRICULTURE DEVELOPMENT BOARD)

THE UNDERSIGNED, being Chairperson of the _____ County Agriculture Development Board, hereby accepts and approves the foregoing restrictions, benefits and covenants.

ACCEPTED AND APPROVED this _____ day of _____, 20 ____.

Chairperson
_____ County Agriculture Development Board

STATE OF NEW JERSEY, COUNTY OF _____ SS.:

I CERTIFY that on _____, 20 _____,

_____ personally came before me and acknowledged under oath, to my satisfaction that this person: (a) is named in and personally signed this DEED OF EASEMENT, (b) signed, sealed and delivered this DEED OF EASEMENT as the Board's act and deed; and (c) is the Chairperson of the _____ County Agriculture Development Board.

Print name and title below signature

(STATE AGRICULTURE DEVELOPMENT COMMITTEE)

The State Agriculture Development Committee has approved the purchase of the development easement on the Premises pursuant to the Agriculture Retention and Development Act, N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32, and has authorized a grant of _____% of the purchase price of the development easement to _____ County in the amount of \$ _____.

Gregory Romano, Executive Director
State Agriculture Development Committee

Date

STATE OF NEW JERSEY, COUNTY OF _____ SS.:

I CERTIFY that on _____, 20 _____,

_____ personally came before me and acknowledged under oath, to my satisfaction, that this person:

- (a) is named in and personally signed this DEED OF EASEMENT,
- (b) signed, sealed and delivered this DEED OF EASEMENT as the Committee's act and deed, and
- (c) is the Executive Director of the State Agriculture Development Committee.

Print name and title below signature

NOTICE

PLEASE TAKE NOTICE that the following ordinance was adopted on first reading by the Township Committee of the Township of Union, County of Hunterdon, State of New Jersey, at a meeting held on the 18th day of February, 1987. The ordinance was then ordered to be published according to law. Notice is hereby given that the said ordinance will be considered for final passage at a public hearing to be held on the 18th day of March, 1987, at 7:30 p.m., or as soon thereafter as the matter may be reached, at the Municipal Building, Perryville Road, Jutland, New Jersey, at which time all interested parties will be heard.


KLARA E. TARSI,
MUNICIPAL CLERK

AN ORDINANCE AMENDING THE LAND USE
CODE OF THE TOWNSHIP OF UNION,
ESTABLISHING THE RIGHT TO FARM IN
UNION TOWNSHIP (AMENDMENT NO. 6)

BE IT ORDAINED by the Township Committee of the Township of Union, in the County of Hunterdon, and the State of New Jersey, as follows:

I. Article XI, Administration, is hereby amended to add the following:

Section 1113 Protection of the Right to Farm

A. Purpose

The purpose of this ordinance in keeping with the policy of the New Jersey legislature as expressed in the Right to Farm Act, N.J.S.A. 4:1C-1 et seq. is to conserve, protect and encourage the development and improvement of agricultural lands within the Township for the production of food and other agricultural products and the preservation of open space; to protect and encourage the viability of the agricultural industry by establishing a positive agricultural business climate in order to promote

ORDINANCE NO. 87-2

agricultural production to serve the interests of all citizens of Union Township. It is the purpose of this ordinance to help reduce the loss of agricultural land in Union Township by protecting commercial farms operated in accordance with acceptable methods and techniques of agricultural production from nuisance actions, while at the same time acknowledging the need to provide a proper balance among the varied and sometimes conflicting interests of all lawful activities in the State of New Jersey.

B. Definitions

1. **Acceptable Management Practices** - Agricultural Management Practices recommended or endorsed by the State Agricultural Development Committee and all relevant Federal or State statutes or rules and regulations adopted pursuant thereto.

2. **Commercial Farm** - Any operation producing with the expectation of sale agricultural or horticultural products worth \$2,500.00 or more annually and which meet the eligibility requirements for differential property taxation pursuant to the "Farmland Assessment Act of 1964", N.J.S.A. 54:4-23.1 et seq.

3. **Nuisance** - Any private action which unreasonably interferes with the comfortable enjoyment of another's property, which may be enjoined or abated, and for which the injured or affected property owner may recover damages.

C. Protections

1. In all relevant actions filed subsequent to the adoption of this ordinance, it shall be presumed that a commercial farm or agricultural use, structure or activity in connection therewith which is conducted or located within Union Township and which conforms to acceptable agricultural management practices and which does not pose a direct threat to public health and safety, shall not constitute a public or private nuisance, nor shall any such use, activity, or structure be deemed to otherwise invade or interfere with the use and enjoyment of any other land or property or pose an unusual or unreasonable threat to persons.

2. Any agricultural use or common farmsite activity which conforms to acceptable agricultural management practices when reasonable and necessary for the operation of the commercial farm may occur on holidays, Sundays, and weekdays, at night and in the day, subject to the restrictions and regulations of the Township's zoning ordinance, State and Township health and sanitary codes, and State and Federal environmental regulations.

3. Agricultural uses and common farmsite activities specifically protected by this ordinance include but are not limited to production, harvesting, storage, grading, packaging and processing of farm products, wholesale and retail marketing of crops, plants, animals,

and other related commodities; the use and applications of techniques and methods of soil preparation and management; fertilization; weed, disease and pest control; disposal of farm waste; irrigation, drainage, and water management; and grazing.

D. Mediation

1. When the Township is in receipt of a complaint alleging that an agricultural use, structure or activity in connection with a commercial farm operation constitutes a nuisance or is not in conformance with acceptable management practices as defined herein, the Township Committee may refer the complaint to the duly appointed Agricultural Protection Committee for mediation.

2. Upon referral of such a complaint by the Township Committee to the Agricultural Protection Committee, the Committee shall invite the affected parties to discuss the nature of the complaint, its reasonableness or unreasonableness in light of acceptable management practices, and any solution or remedy which will satisfy the aggrieved party without interfering with or discouraging the operation of the commercial farm against which the complaint was registered. Determination of whether the farm is following acceptable management practices shall be made by the State Agricultural Development Committee. The results of the meeting shall be non-binding upon either party and shall not abridge the right of either party to take legal action concerning the complaint.

E. Composition of the Agricultural Protection Committee

1. The Agricultural Protection Committee shall consist of five (5) members.

2. The members of the Agricultural Protection Committee shall serve for a term of two (2) years. If a member dies or retires from the Committee before the term is up, the member who takes his or her place shall serve the unexpired term.

F. Deed Notice

Whenever (1) a "commercial farm", as that term is defined in Section 3.3, is subdivided, or (2) a new major or minor subdivision abutts a "commercial farm", or (3) a new major or minor subdivision contains space which were not owned by individual homeowners or a homeowner's association, and said space is at least five (5) acres in size, then the following language shall be inserted in the deed of all lots:

Grantee is hereby noticed there is, or may in the future be, farm use near the described premises from which may emanate noise, odors, dust, and fumes associated with agricultural practices permitted

ORDINANCE NO. 87-2

under the "Right to Farm" section of the Union Township Zoning Ordinance.

II. All Ordinances or parts of Ordinances inconsistent herewith are hereby amended as to such inconsistency only.

III. If the provisions of any article, section, subsection, paragraph, subdivision or clause of this Ordinance shall be judged invalid by any court of competent jurisdiction, such order or judgment shall not effect or invalidate the remainder of any such article, section, subsection, paragraph or clause, and, to this end, the provisions of this Ordinance are hereby declared to be severable.

IV. This Ordinance shall take effect immediately upon final passage and publication according to law.

V. Short Title. The short title of this Ordinance shall be "Amendment No. 6 to the Union Township Land Use Code".

J. W. THATCHER, MAYOR

ATTEST:

Klara E. Tarsi
KLARA E. TARSI, CLERK

First Reading: 2/18/87

Publication: 3/4/87

Second Reading: 3/18/87

Published by
Title Only: 3/25/87

I, Klara E. Tarsi hereby certify that the above to be a true and correct copy of an ordinance passed by the Township Committee of Union Township, County of Hunterdon, State of New Jersey at a Township Committee meeting held on March 18, 1987.

Klara E. Tarsi
Klara E. Tarsi
Township Clerk

ORDINANCE NO. 87-2

Appendix E.1. 1. Farm Assessed Parcels

BLOCK	LOT	PROPERTY CLASS	ACRES
000010000	000010000	3A_3B	44.72
000010000	000020000	3A_3B	47.39
000010000	000030000	3A_3B	12.35
000010000	000110000	3A_3B	6.61
000010000	000120000	3A_3B	96.04
000010000	000130000	3A_3B	19.53
000010003	000020000	3A_3B	7.83
000010008	000150000	3B	5.24
000010008	000230000	3B	36.02
000010008	000250000	3A_3B	9.09
000010009	000270000	3A	0.87
000010009	000350000	3A	5.30
000030000	000010000	3B	1.19
000040000	000050000	2_3B	5.27
000040000	000060000	3B	0.96
000050000	000010000	3B	14.54
000050000	000030003	3A_3B	28.59
000050000	000040000	3A_3B	8.40
000050000	000040003	3B	68.04
000050000	000040004	3B	4.20
000050000	000100000	3A	5.45
000050000	000120000	3A_3B	5.69
000050000	000140000	3B	12.78
000050000	000150000	3A_3B	12.36
000050000	000160002	3A	4.67
000050000	000160003	3A_3B	26.78
000050000	000160005	2_3B	7.00
000050000	000160007	2_3A_3B	6.68
000050000	000160008	3B	6.40
000050000	000160010	3B	17.53
000050000	000160014	3B	11.93
000050000	000170000	3A	49.57
000050000	000170003	3B	2.31
000050000	000200000	3A_3B	26.13
000060000	000040000	3B	61.00
000060000	000040001	3A_3B	6.38
000060000	000040003	3A_3B	5.79
000060000	000050000	3A_3B	36.87
000060000	000090000	3B	121.81
000060000	000100000	3B	10.15
000070000	000020000	3A_3B	14.93
000090000	000030000	3B	66.79
000090000	000180000	3A_3B	10.94
000110000	000030002	3A	19.84
000120000	000010001	3B	10.89
000120000	000020000	3A_3B	9.42
000120000	000020001	4B_3B	14.36
000120000	000060000	2_3B	19.28
000120000	000140000	4A_3B	81.86
000130000	000060000	3B	165.07
000130000	000110000	3A_3B	19.44
000140000	000020000	3A	5.61
000140000	000030000	3A_3B	27.14
000140000	000050000	3A_3B	22.03

Appendix E.1. 1. Farm Assessed Parcels

BLOCK	LOT	PROPERTY CLASS	ACRES
000140000	000050001	3A_3B	9.15
000140000	000160000	3B	11.45
000140000	000220002	3A_3B	6.21
000140000	000230000	3A_3B	40.08
000150000	000010000	3A_3B	26.27
000150000	000030000	3A_3B	28.47
000150000	000030001	3A_3B	33.07
000150000	000030003	2_3B	22.84
000150000	000030006	2_3B	10.09
000150000	000040000	3A_3B	9.12
000150000	000050000	3A_3B	7.21
000150000	000060000	3A_3B	16.40
000150000	000080000	3A_3B	31.73
000150000	000080001	2_3B	7.46
000150000	000080002	3B	11.54
000150000	000090000	3B	49.00
000150000	000100000	3B	41.44
000150000	000110000	3B	24.53
000150000	000130000	3A_3B	84.82
000150000	000210000	3B	5.65
000150000	000220000	3B	15.01
000150000	000230000	3B	4.86
000150000	000240000	3B	8.30
000150000	000250000	3B	9.59
000150000	000280001	3A_3B	18.09
000150000	000380000	3B	22.01
000150000	000520000	3B	3.06
000150000	000530000	3B	3.39
000160000	000010000	3B	20.54
000160000	000030000	3A_3B	77.93
000160000	000050000	3B	10.38
000160000	000090001	3A	3.01
000160000	000090003	2_3B	20.69
000170000	000010000	3A_3B	7.03
000170000	000010010	3A_3B	8.62
000170000	000030000	3A_3B	6.08
000170000	000040002	3A_3B	8.56
000170000	000070000	3A_3B	10.95
000170000	000110001	3B	4.66
000170000	000150000	3B	2.64
000170000	000240000	3B	3.54
000190000	000020000	3A_3B	26.07
000190000	000030000	3B	4.75
000190000	000060000	3A_3B	67.83
000190000	000130000	3A_3B	6.48
000190000	000140000	3B	4.52
000210000	000280000	3A_3B	4.96
000220000	000270000	3A_3B	44.08
000220000	000280000	3B	21.91
000220000	000300000	1_3B	63.35
000250000	000020000	2_3B	2.40
000250000	000070000	3B	25.75
000250000	000180001	3A_3B	31.15
000250000	000180003	3A_3B	12.41

Appendix E.1. 1. Farm Assessed Parcels

BLOCK	LOT	PROPERTY CLASS	ACRES
000250000	000180004	3B	37.27
000250000	000180006	2_3B	51.70
000250000	000180008	4A_3B	8.65
000250000	000210000	3B	43.18
000250000	000270000	3A_3B	26.09
000250000	000350000	3A_3B	150.95
000250000	000370000	3A_3B	40.13
000250000	000370009	2_3B	44.44
000260000	000100000	3A_3B	18.99
000260000	000120002	3B	5.42
000260000	000150000	3A_3B	6.49
000260000	000160000	3A_3B	18.71
000270000	000010001	3A_3B	13.47
000270000	000030014	3A_3B	8.30
000280000	00020000	3B	15.33
000280000	000100000	3A_3B	15.05
000280000	000110000	2_3B	8.91
000280000	000120000	3A_3B	59.79
000280000	000210000	3A_3B	62.77
000280000	000210001	3A_3B	10.07
000280000	000230000	3A_3B	59.39
000280000	000240000	3A_3B	58.41
000280000	000250000	3A_3B	35.08
000280000	000310000	3B	7.05
000280000	000330000	2_3B	78.35
000280000	000350000	3A_3B	6.68
000280000	000360000	3B	4.90
000280000	000370000	3B	4.33
000280000	000440000	3B	5.43
000280000	000450000	3A_3B	5.15
000280000	000480000	3A	6.34
000290000	000040000	3A_3B	13.17
000290000	000060000	2_3B	7.70
000290000	000100000	3B	57.31
000290000	000110000	2_3B	6.01
000290000	000170000	3A_3B	68.56
000290000	000180000	3A_3B	9.83
000290000	000230000	3A_3B	23.56
000290000	000250001	3A_3B	6.86
000290000	000270000	3A_3B	20.18
000290000	000290000	3B	1.83
000290002	000010000	3A_3B	39.09
000300000	000010000	3A_3B	29.29
000300000	000060001	3A_3B	13.10
000300000	000070000	3A_3B	45.46
000300000	000070001	3A_3B	6.93
000300000	000070002	3A_3B	7.70
000300000	000070003	3A_3B	14.12
000300000	000080000	3A_3B	62.30
000300000	000110000	3A_3B	45.79
000300000	000120000	3A_3B	34.03
		Total:	3837.78

Appendix E.2. Farm Parcels Meeting the SADC Minimum Eligibility Criteria for Agricultural Soils

BLOCK	LOT	PROPERTY CLASS	SIZE (ACRES)	ACRES AGRICULTURAL SOIL	PERCENT AGRICULTURAL SOIL
000010000	000010000	3A_3B	44.72	27.97	62.55
000010000	000020000	3A_3B	47.39	47.39	100.00
000010000	000030000	3A_3B	12.35	12.35	100.00
000010003	000020000	3A_3B	7.83	7.64	97.65
000010008	000150000	3B	5.24	5.19	99.00
000010008	000230000	3B	36.02	27.23	75.59
000010009	000270000	3A	0.87	0.87	100.00
000010009	000350000	3A	5.30	5.30	100.00
000030000	000010000	3B	1.19	1.19	100.00
000040000	000050000	2_3B	5.27	4.84	91.71
000040000	000060000	3B	0.96	0.93	96.16
000050000	000040003	3B	68.04	48.37	71.09
000050000	000100000	3A	5.45	4.60	84.42
000050000	000140000	3B	12.78	11.69	91.47
000050000	000150000	3A_3B	12.36	9.77	79.04
000050000	000160003	3A_3B	26.78	23.91	89.27
000050000	000160005	2_3B	7.00	5.58	79.81
000050000	000160007	2_3A_3B	6.68	6.68	100.00
000050000	000160008	3B	6.40	6.40	100.00
000050000	000170000	3A	49.57	36.42	73.46
000050000	000170003	3B	2.31	2.04	88.27
000050000	000200000	3A_3B	26.13	26.13	100.00
000060000	000040000	3B	61.00	43.94	72.03
000060000	000050000	3A_3B	36.87	23.22	62.99
000060000	000090000	3B	121.81	62.92	51.65
000060000	000100000	3B	10.15	9.44	92.96
000070000	000020000	3A_3B	14.93	11.96	80.11
000090000	000180000	3A_3B	10.94	8.97	81.98
000110000	000030002	3A	19.84	14.08	70.98
000120000	000010001	3B	10.89	10.89	100.00
000120000	000020000	3A_3B	9.42	8.32	88.33
000120000	000020001	4B_3B	14.36	14.36	100.00
000120000	000060000	2_3B	19.28	19.28	100.00
000120000	000140000	4A_3B	81.86	77.95	95.21
000130000	000060000	3B	165.07	149.43	90.53
000130000	000110000	3A_3B	19.44	16.32	83.92
000140000	000160000	3B	11.45	11.45	100.00
000140000	000230000	3A_3B	40.08	29.95	74.72
000150000	000010000	3A_3B	26.27	18.61	70.83
000150000	000030000	3A_3B	28.47	14.43	50.69
000150000	000030006	2_3B	10.09	5.45	54.06
000150000	000040000	3A_3B	9.12	6.54	71.76
000150000	000050000	3A_3B	7.21	7.21	100.00
000150000	000060000	3A_3B	16.40	13.20	80.49
000150000	000080000	3A_3B	31.73	25.25	79.58
000150000	000080001	2_3B	7.46	7.05	94.41
000150000	000080002	3B	11.54	11.53	99.94
000150000	000090000	3B	49.00	43.45	88.66

Appendix E.2. Farm Parcels Meeting the SADC Minimum Eligibility Criteria for Agricultural Soils

BLOCK	LOT	PROPERTY CLASS	SIZE (ACRES)	ACRES AGRICULTURAL SOIL	PERCENT AGRICULTURAL SOIL
000150000	000100000	3B	41.44	25.94	62.59
000150000	000130000	3A_3B	84.82	62.79	74.02
000150000	000230000	3B	4.86	4.86	100.00
000150000	000280001	3A_3B	18.09	10.71	59.22
000150000	000520000	3B	3.06	3.06	100.00
000160000	000010000	3B	20.54	14.09	68.56
000160000	000030000	3A_3B	77.93	54.78	70.29
000160000	000050000	3B	10.38	9.10	87.64
000160000	000090001	3A	3.01	3.01	100.00
000160000	000090003	2_3B	20.69	14.69	70.99
000170000	000010000	3A_3B	7.03	7.03	100.00
000170000	000010010	3A_3B	8.62	8.62	100.00
000170000	000030000	3A_3B	6.08	6.08	100.00
000170000	000040002	3A_3B	8.56	6.21	72.50
000170000	000070000	3A_3B	10.95	10.95	99.97
000170000	000150000	3B	2.64	2.64	100.00
000170000	000240000	3B	3.54	3.54	100.00
000190000	000020000	3A_3B	26.07	26.07	100.00
000190000	000030000	3B	4.75	4.75	100.00
000190000	000060000	3A_3B	67.83	67.73	99.86
000190000	000130000	3A_3B	6.48	6.48	100.00
000190000	000140000	3B	4.52	4.52	100.00
000210000	000280000	3A_3B	4.96	4.96	100.00
000220000	000270000	3A_3B	44.08	38.95	88.35
000220000	000280000	3B	21.91	20.53	93.72
000250000	000180001	3A_3B	31.15	24.68	79.22
000250000	000180003	3A_3B	12.41	9.91	79.83
000250000	000180004	3B	37.27	33.69	90.40
000250000	000180006	2_3B	51.70	29.67	57.39
000250000	000180008	4A_3B	8.65	6.50	75.06
000250000	000210000	3B	43.18	23.68	54.83
000250000	000270000	3A_3B	26.09	22.34	85.63
000250000	000370000	3A_3B	40.13	38.00	94.70
000260000	000100000	3A_3B	18.99	18.99	100.00
000260000	000120002	3B	5.42	4.62	85.10
000260000	000150000	3A_3B	6.49	6.49	100.00
000260000	000160000	3A_3B	18.71	18.71	100.00
000270000	000010001	3A_3B	13.47	7.79	57.83
000270000	000030014	3A_3B	8.30	7.04	84.80
000280000	00020000	3B	15.33	15.33	100.00
000280000	000100000	3A_3B	15.05	10.30	68.47
000280000	000110000	2_3B	8.91	8.90	99.90
000280000	000120000	3A_3B	59.79	58.51	97.85
000280000	000210001	3A_3B	10.07	10.07	100.00
000280000	000230000	3A_3B	59.39	52.40	88.24
000280000	000240000	3A_3B	58.41	48.03	82.22
000280000	000250000	3A_3B	35.08	31.09	88.62
000280000	000310000	3B	7.05	7.05	100.00

Appendix E.2. Farm Parcels Meeting the SADC Minimum Eligibility Criteria for Agricultural Soils

BLOCK	LOT	PROPERTY CLASS	SIZE (ACRES)	ACRES AGRICULTURAL SOIL	PERCENT AGRICULTURAL SOIL
000280000	000350000	3A_3B	6.68	5.47	81.95
000280000	000360000	3B	4.90	4.08	83.21
000280000	000370000	3B	4.33	4.33	100.00
000280000	000440000	3B	5.43	5.43	100.00
000280000	000450000	3A_3B	5.15	5.15	100.00
000280000	000480000	3A	6.34	6.34	100.00
000290000	000040000	3A_3B	13.17	13.17	99.98
000290000	000060000	2_3B	7.70	7.70	100.00
000290000	000110000	2_3B	6.01	6.01	100.00
000290000	000130000		104.19	90.54	86.90
000290000	000170000	3A_3B	68.56	68.54	99.97
000290000	000180000	3A_3B	9.83	9.21	93.76
000290000	000230000	3A_3B	23.56	22.70	96.36
000290000	000250001	3A_3B	6.86	6.86	100.00
000290000	000290000	3B	1.83	1.83	100.00
000300000	000060001	3A_3B	13.10	13.10	100.00
000300000	000070001	3A_3B	6.93	6.93	100.00
000300000	000070002	3A_3B	7.70	5.27	68.42
000300000	000070003	3A_3B	14.12	14.11	99.93
000300000	000080000	3A_3B	62.30	54.88	88.09
Total:			2,717.86	2,255.14	

Appendix E.3. Farm Parcels Meeting the SADC Minimum Eligibility Criteria Tillable Land

BLOCK	LOT	PROPERTY CLASS	SIZE (ACRES)	ACRES TILLABLE	PERCENT TILLABLE	TILLABLE CATEGORY
000010000	000020000	3A_3B	47.39	37.33	78.78	3
000010000	000030000	3A_3B	12.35	8.57	69.41	3
000050000	000040003	3B	68.04	43.92	64.55	4
000050000	000150000	3A_3B	12.36	7.30	59.10	3
000050000	000160003	3A_3B	26.78	14.70	54.89	3
000050000	000170000	3A	49.57	42.20	85.13	3
000050000	000170003	3B	2.31	2.29	99.38	1
000070000	000020000	3A_3B	14.93	11.18	74.90	3
000120000	000010001	3B	10.89	6.53	59.94	3
000130000	000060000	3B	165.07	49.86	30.21	4
000140000	000030000	3A_3B	27.14	15.59	57.46	3
000150000	000050000	3A_3B	7.21	5.57	77.31	2
000150000	000060000	3A_3B	16.40	11.92	72.71	3
000150000	000090000	3B	49.00	37.95	77.45	3
000150000	000520000	3B	3.06	3.02	98.56	1
000160000	000010000	3B	20.54	14.08	68.53	3
000160000	000030000	3A_3B	77.93	44.93	57.65	4
000170000	000010010	3A_3B	8.62	5.71	66.26	2
000170000	000030000	3A_3B	6.08	4.92	80.83	1
000170000	000040002	3A_3B	8.56	8.25	96.34	2
000170000	000070000	3A_3B	10.95	7.97	72.75	3
000190000	000060000	3A_3B	67.83	25.71	37.91	4
000220000	000270000	3A_3B	44.08	35.51	80.55	3
000220000	000280000	3B	21.91	15.37	70.17	3
000250000	000270000	3A_3B	26.09	15.31	58.69	3
000250000	000370000	3A_3B	40.13	36.95	92.06	3
000260000	000100000	3A_3B	18.99	12.51	65.90	3
000260000	000150000	3A_3B	6.49	5.33	82.13	1
000260000	000160000	3A_3B	18.71	10.29	55.00	3
000280000	000110000	2_3B	8.91	6.07	68.10	2
000280000	000120000	3A_3B	59.79	42.09	70.40	4
000280000	000230000	3A_3B	59.39	28.05	47.24	4
000280000	000250000	3A_3B	35.08	24.17	68.89	3
000290000	000040000	3A_3B	13.17	9.41	71.45	3
000290000	000130000	15C	104.19	58.32	55.98	4
000290000	000170000	3A_3B	68.56	52.19	76.13	4
000290000	000230000	3A_3B	23.56	14.42	61.20	3
000290000	000250001	3A_3B	6.86	5.51	80.41	2
000300000	000060001	3A_3B	13.10	10.90	83.20	3
000300000	000070003	3A_3B	14.12	13.75	97.37	3
000300000	000080000	3A_3B	62.30	53.37	85.67	4
Total:			1,358.43	859.04		

Appendix E.4. Targeted Farms

BLOCK	LOT	PROPERTY CLASS	ACRES	ACRES TILLABLE	PERCENT TILLABLE	TILLABLE CATEGORY	AGRICULTURAL SOIL (AC)	AGRICULTURAL SOIL (%)
000010000	000020000	3A_3B	47.39	37.33	78.78	3	47.39	100.00
000010000	000030000	3A_3B	12.35	8.57	69.41	3	12.35	100.00
000160000	000010000	3B	20.54	14.08	68.53	3	14.09	68.56
000160000	000030000	3A_3B	77.93	44.93	57.65	4	54.78	70.29
000190000	000060000	3A_3B	67.83	25.71	37.91	4	67.73	99.86
000250000	000270000	3A_3B	26.09	15.31	58.69	3	22.34	85.63
000250000	000370000	3A_3B	40.13	36.95	92.06	3	38.00	94.70
000260000	000100000	3A_3B	18.99	12.51	65.90	3	18.99	100.00
000260000	000150000	3A_3B	6.49	5.33	82.13	1	6.49	100.00
000260000	000160000	3A_3B	18.71	10.29	55.00	3	18.71	100.00
000280000	000110000	2_3B	8.91	6.07	68.10	2	8.90	99.90
000280000	000120000	3A_3B	59.79	42.09	70.40	4	58.51	97.85
000280000	000230000	3A_3B	59.39	28.05	47.24	4	52.40	88.24
000280000	000250000	3A_3B	35.08	24.17	68.89	3	31.09	88.62
000290000	000040000	3A_3B	13.17	9.41	71.45	3	13.17	99.98
000290000	000170000	3A_3B	68.56	52.19	76.13	4	68.54	99.97
000290000	000230000	3A_3B	23.56	14.42	61.20	3	22.70	96.36
000290000	000250001	3A_3B	6.86	5.51	80.41	2	6.86	100.00
000300000	000060001	3A_3B	13.10	10.90	83.20	3	13.10	100.00
000300000	000070003	3A_3B	14.12	13.75	97.37	3	14.11	99.93
000300000	000080000	3A_3B	62.30	53.37	85.67	4	54.88	88.09
		Total:	701.28	470.94	1,476.10	-	645.12	1,977.99